

Montana Outdoors

MARCH/APRIL 2004

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AVIAN SPECTACLE

What draws so many
snow geese and shorebirds to
Freezout Lake each spring?

Get out there this spring!
MOREL IMPERATIVE

GARBAGE PAIL GRIZZLIES

Is rural trash thwarting
the bear's recovery?

A PLACE OF PEACE

Chief Plenty Coups
State Park's atmosphere
of harmony and goodwill





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CONTENTS

Montana Outdoors

March/April 2004

FEATURES

- 6 Cold Turkeys** After being successfully introduced far north of its historic range, could this bird thrive elsewhere in our chilly state? *By Andrew McKean*
- 12 On the Trail of the Elusive Morel** How to find, harvest, and safely cook Montana's most delectable mushroom. *By Ellen Horowitz*
- 16 A Place of Peace** Chief Plenty Coups State Park commemorates the great Apsáalooke warrior and his legacy of harmony and goodwill. *By Bert Gildart*
- 22 Death by Garbage** How trash, dog chow, bird seed, and other food attractants along the urban interface are "killing" grizzlies and stifling the bears' natural expansion. *By Bill Schneider. Illustrations by Ron Finger*
- 26 Montana's Avian Spectacle** Migrating waterfowl and shorebirds that congregate at Freezout Lake each spring create a bird watcher's paradise. *By Bert Gildart*
- 32 Tough Love** Why it makes sense to kill some fish in order to save others. *By Brian Marotz*



NEAL & MU WISHLER

DEPARTMENTS

- 2 Letters**
- 3 Natural Wonders**
- 3 Our Point of View** State Parks More Affordable
- 4 Outdoors Report**
- 11 Out Here** High Wire Act
- 37 Outdoors Portrait** Muskrat
- 38 Parting Shot** Turkey Lurking

COVER PHOTO: Black primaries spread wide, a snow goose descends onto Freezout Lake, near Great Falls. Learn about the waterfowl and shorebirds that congregate here each spring on page 26. Photo by John R. Ford.

OPPOSITE PAGE: See page 12 to learn where morel hunters like young Jake Jones find their treasure. Photo by Donald M. Jones.

Hungry snake

Your November/December issue contained a letter regarding snakes eating fish. My wife and I witnessed such an event last summer while on a trail along the Madison River in Bear Trap Canyon. I took the enclosed picture of what must be a rarely seen event. Do you know what species of fish and snake these are?

STEVE MARINAK
North Palm Beach, Florida

EDITOR REPLIES: *Our resident snake expert, Walt Timmerman, says it's a wandering garter snake. But the fish has us stumped because the picture isn't clear enough. One biologist thought it might be a stonecat (if the snake is small) though that tiny member of the catfish family has no purple hue. Another ventured that it could be an arctic grayling.*



New fish management?

A few issues back I read about the new fisheries chief. At the time, I wondered how policies would change as a result of his personal interest in native fish populations.

Now I hear news reports about poisoning drainages and changing regulations to eliminate years of stocking and management policies just to enhance native species.

Instead of spending all this money on poisoning and restocking programs, would it not be better to build more hatcheries? Then any species you choose could be raised, and continued stocking and flooding the gene pool could result in a continued fishery. I realize they may never



achieve the ultimate pure strain, but aren't we opening the door to a higher likelihood of disease with a 100 percent stocked population of a pure strain?

How many millions of dollars and years of management policy are we going to throw away every time a new director comes on board with a new pet personal project?

DEAN A. HAZUKA
Marion

CHRIS HUNTER, FWP FISHERIES CHIEF, REPLIES: *Montana Fish, Wildlife & Parks has been managing native fish for decades. In fact, the department's magazine contained articles about restoring arctic grayling and westslope cutthroat as far back as the 1950s.*

The removal of nonnative trout in some streams and lakes is the only way to restore native strains of westslope cutthroat in those waters (see "Tough Love," starting on page 32 of this issue). We often stock hatchery-reared westslope cutthroats in these waters, but only after the nonnatives have been removed. (Stocking pure-strain fish species does not increase the likelihood of disease.) We only do a limited number of these "rehabilitation" projects, and only in lakes and streams where we can maximize the chances of success.

German hunting gets mixed reviews

The article "A Montana Hunter in Bavaria" (November/December) is disgusting. It seems more like canned hunting than genuine hunting. It's simply too

regimented and strict, not to mention elitist. I would hesitate to even call it hunting.

I would refer you and your readers to an interview with the renowned biologist Valerius Geist in the current issue of *Bugle* magazine. He is a big fan of the American hunting system, in which even the non-elite can hunt. I don't think American hunters would tolerate the German model, so please forget about it.

ROBERT RUBOSA
Missoula

The November/December issue was extraordinary. I especially liked the article on how Germany handles the problem of urban sprawl and providing wild places for hunting. I lent that issue to a friend, and he passed it on to somebody else, and, well, so much for "lending." Now I need to order two more copies.

ROSEMARY JONES
Spokane, Washington

Family of fans

Our family has been fans of *Montana Outdoors* for years. What a treat to open the November/December issue and find a 2004 calendar inside. It is a great example of color, humor, and interest-

ing information. Thanks for the early Christmas present.

SANDY TRUE
Thompson Falls

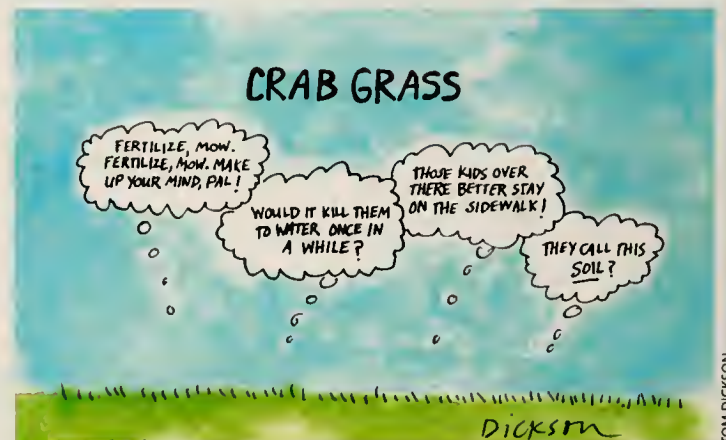
Why not move the elk?

I read with great interest the article "The Elk Next Door" (November/December 2003). I have hunted the Yaak area since about 1976, and since that time the elk population there has sharply declined. I think it is because the clear-cuts have all grown up. Why not relocate elk from problem areas where there are too many to areas like the Yaak? It would boost the economy for those areas, and the people there would welcome the elk with open arms.

DONALD BERGMAN
Veradale, Washington

JERRY BROWN, FWP WILDLIFE BIOLOGIST AT LIBBY, REPLIES: *According to most members of the Libby Rod and Gun Club who attended a meeting FWP held in early January, the area where you hunt, in the Purcell Elk Management Unit, now has more elk than any of those hunters could remember. The population is especially strong in the Libby area, where elk numbers grew in the 1980s and early 1990s, declined after the severe winter of 1996-97, and have been steadily growing since then.*

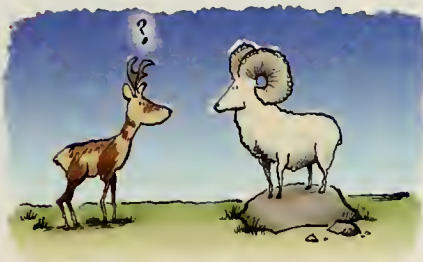
Continued on page 36.



Q. I once read there was a subspecies of bighorn sheep in eastern Montana and the Dakotas, called the Audubon bighorn, that went extinct in the early 1900s. Is that true?

A. Bighorn sheep did disappear from that area back then, but they probably weren't a separate subspecies. According to research published in 2000 by Rob Ramey, curator of zoology at the Denver Museum of Nature and Science, there never was a distinct Audubon subspecies. The "extinct" sheep were just regular Rocky Mountain bighorns that once lived east of the species's current

range. However, the "Audubon bighorn" mystique lives on throughout the northern Great Plains.



Q. The Montana state highway map shows the state's lowest point near the Idaho-Montana border on U.S. Route 2. But where exactly is the spot? I want to actually stand there.

A. Then put your waders on,

because that spot, 1,820 feet above sea level, is in the middle of the Kootenai River where it crosses the Idaho-Montana border. The river flows from Montana to Idaho, so the elevation drops as you follow it west.

Q. Are the mountains southeast of Havre called "Bear Paw," "Bears Paw," or "Bear Paws"?

A. As with so many place names, there is no definitive answer. The state highway map has them as the "Bears Paw Mountains," though history books call the 1877 confrontation in which Gen. Nelson Miles finally captured Chief

Joseph of the Nez Perce the Battle of the Bear's Paw. And Havre area fisheries manager Kent Gilge says everyone in that part of the state calls them the Bear Paws. When in doubt, you can't go wrong with the local nomenclature.

? Wonder about some part of Montana's natural world? E-mail us at: tdickson@state.mt.us



OUR POINT OF VIEW

JEFF HAGENER | Director of Montana Fish, Wildlife & Parks

State parks now more affordable than ever

IF YOU HAVE RELATIVES HEADING to Montana for a visit, or if you are looking for places where your family can recreate or learn more about this great state, consider visiting some of Montana's 42 state parks.

A trip to a state park can be a walk into the past: on a battlefield, along a ghost town's wooden boardwalk, across an ancient seabed rich in dinosaur bones. It can be a quiet place to view wildlife or catch a fish. Or a campsite where family and friends share stories by the light of a campfire.

Though Glacier and Yellowstone national parks are big draws to Montana, our state parks offer some equally attractive sights and features that many people miss on their way to and from the national sites. Marvel at the stupendous stalactites and stalagmites in Lewis and Clark Caverns State Park, for example, or the eerie rock formations at Makoshika. If it's recreation you're after, try Flathead Lake's camping and boating, the crappie fishing at Tongue River Reservoir, or a float trip down the beautiful and remote Smith River. Join the many visitors who flock to our urban state parks, such as the trimmed lawns and colorful gardens of the state Capitol grounds, or the swimming beaches, hiking trails, and picnic areas at Spring Meadow in Helena and Lake Elmo in Billings. And don't miss our cultural and historical parks, such as Travelers' Rest, Missouri Headwaters, and Ulm Pishkun, as well as Chief Plenty Coups, which we feature in this issue.



Montana Fish, Wildlife & Parks

State parks have changed a lot in the past 15 years. In the late 1980s, the parks were in rough shape: roads were impassable, maintenance was neglected, and many facilities had reached the end of their useful life. In 1989, the legislature authorized us to begin charging a day-use fee. With those funds, and some dollars later from the state hotel room tax, we've begun raising state parks to their great potential.

Beginning this year, Montanans no longer need to pay daily or annual state park fees. According to a law passed by the 2003 legislature, revenue to operate, maintain, and improve state parks will come from an optional \$4 added to vehicle registrations. (Camping and other special fees will still be required, and nonresidents will continue to pay daily or annual entrance fees.)

We are extremely proud of Montana's state park resources and programs and strive to make them as inviting, entertaining, and accessible as possible. To do that, we depend heavily on the hundreds of volunteers and "friends-of" groups whose generosity and energy help us keep the parks in good shape and teach visitors about state park history and amenities.

Starting this year, a Montana vehicle license plate acts as your park pass. That means state parks will be more affordable than ever to Montana residents and, we hope, more people than ever will get the chance to see what their state parks have to offer.

To learn more about Montana state parks, visit the FWP website at fwp.state.mt.us.

M. Jeff Hagener

MSU researchers help keep hatchery trout healthy

Though Montana is renowned for its wild trout management program, the state also rears (for stocking in lakes) hundreds of thousands of trout each year, including the increasingly uncommon westslope cutthroat. A new study headed by Eileen Ryce, a research scientist at Montana State University, is helping hatchery managers reduce the number of hatchery trout succumbing to deadly bacterial coldwater disease. Though FWP hatcheries produce some of the healthiest trout in the country, losses to bacterial coldwater disease have plagued the facilities, and oth-

ers in the Pacific Northwest, for decades.

"It's the number one disease problem facing Montana's coldwater fish hatcheries," says Jim Peterson, fish health coordinator for Montana FWP.

For years, workers at coldwater hatcheries throughout Montana have been learning more about the disease and how to reduce its spread to trout. During 2002 and 2003, Ryce and MSU colleague Al Zale contributed to that effort by looking at different factors in FWP's Washoe Park fish hatchery that made fish more susceptible to the disease. One discovery was that the pathogen can be passed from adult to juvenile trout. "It turns out a lot of fish, when they hatch, already have



MSU researcher Eileen Ryce examines trout-rearing equipment at FWP's Washoe Park fish hatchery in Anaconda.

the disease," Ryce says.

In addition, the researchers found the bacterium that causes the disease in the groundwater that supplies the hatchery, as well as in tanks, water lines, and other equipment. Working with hatchery staff, they devised ways to reduce bacterial levels in adult fish, disinfect contaminated raceways, and otherwise lessen chances of the potentially deadly pathogen

infecting fish.

"This study is helping us better understand and combat coldwater bacterial disease," says Peterson. "Especially important were the findings with regard to transmission from parent to offspring through the egg. That has been one of the more serious aspects of the disease, because it can be spread to other hatcheries when eggs are shipped."

How to help the rest of the cast

Hunters, through their license fees and a federal excise tax on firearms and ammunition, fund the management of elk, deer, and other game species. But who pays to manage Montana's 400-plus nongame wildlife species?

Mainly, it's citizens who donate to the nongame wildlife checkoff on state income tax forms. Each year, on the eagle image at the bottom of the form, thousands of Montanans write in voluntary, tax-deductible donations totaling roughly \$25,000. That money, which gets matched by federal and private funds, is used for a range of management work. Nongame

wildlife donations pay to build nesting boxes for bluebirds, monitor raptor populations, and produce wildlife identification guides, among other projects.

"Many people don't realize that the state income tax form

contributions are the main funding source for managing Montana's nongame wildlife species," says Kristi DuBois, FWP Native Species Program coordinator. "If you care about bluebirds, eagles, loons, and other nongame wildlife, tax time is a great time to help them out."



MAKOSHICA STATE PARK



Do the State Park TWIST

Fun things you never expected to do in Montana state parks

Dinosaur Shoot

Makoshika State Park is well known for its geological wonders and fossil finds. But the park also sports a top-notch outdoor shooting range, complete with target backdrops at 25, 50, 75, and 100 yards, a shotgun patterning frame, and covered shooting benches. For hours and more information, call the park at (406) 377-6256.

How'd you do?

Over the past few months, roughly 80,000 households across Montana have received a phone call from FWP asking about hunting and harvest activity from the 2003 season. The department's yearly hunting and harvest survey, which began in 1982, gathers information that wildlife managers use to better understand wildlife population trends and adjust seasons and permit quotas.

"This information is essential for managing Montana's wildlife," says Keith Aune, research and technical services supervisor for FWP's Wildlife Division. "If we don't know how many animals are harvested, or how many days afield hunters put in, we don't have a full picture of what's going on out there."

Candy Hinz, who coordinates the survey, says hunters don't seem to mind taking a few minutes to provide FWP with information on their hunting activity. "Hunters like to talk about their hunt, about how they did last fall," she says.



MONTANA FWP

Recently, some hunters who put their names on the new national do-not-call registry have asked why FWP can still call their homes. Telemarketers are prohibited from calling names in the registry, established in October 2003, by laws enforced by the states and by the federal trade and communications commissions. However, notes Hinz, because the registry does not apply to nonprofits and government agencies, FWP is not violating the new laws.

"We're not selling anything," she explains. "We are asking for information that can help us better manage the state's wildlife, something we've been doing for the past 22 years."

Montana dodges CWD "bullet" once again

Montana remains free of chronic wasting disease, based on the results of more than 1,600 wild deer and elk tested last fall. The tested animals had been shot by hunters in southeastern and northeastern Montana, where FWP officials fear infected deer and elk could enter the state from Wyoming or Saskatchewan, where the disease has been found in wild populations. The department also targeted the Philipsburg area,

between Butte and Missoula, where nine captive elk tested positive for CWD in 1999.

"It appears that, for the time

being, we have once again dodged the bullet," says Tom Lemke, FWP wildlife biologist at Livingston.



CAROL POLICH

Wolves to stay listed for now

Gray wolves in the Northern Rockies will retain federal protection due to a provision in Wyoming law and the state's management plan promoted by those who want to reduce wolf numbers in that state.

In January, the U.S. Fish and Wildlife Service said it could not remove gray wolves from federal protection because Wyoming's law and plan proposal classify wolves in part of the state as predators, where they could be hunted without regulation. The provisions are supported by Wyoming livestock owners concerned about the spread of wolves from Yellowstone National Park, where the wolves were reintroduced beginning in 1995.

"We knew all along that the feds would have problems with Wyoming's predator designation, so even though we're disappointed, this is no big surprise" says Chase Hibbard, a Wolf Creek rancher who was chair of Montana's Wolf Management Advisory Council, which designed Montana's wolf management plan.

In the mid-1990s, to hasten the overall pace of wolf recovery in the Northern Rockies, 66 wolves were released into Yellowstone and central Idaho. The population has grown to 760 wolves and continues to increase and expand. State control of management could allow for regulated hunting seasons and other activities that would keep the population in check.

USFWS officials have praised Idaho's and Montana's management plans for their provisions to sustain wolf numbers and had intended to delist gray wolves in January. But now the agency must wait until Wyoming revises its law and plan.



Despite the good news, Lemke and other FWP biologists remain vigilant.

"We're now real concerned about recent reports of CWD west of the Continental Divide in Wyoming," Lemke says. "Our fear is that elk in Jackson Hole will get infected and pass the disease on to the northern Yellowstone elk herd."

Because of concerns about CWD in Yellowstone elk, FWP is now testing several hundred elk shot during the late-season hunt in Gardiner.

Cold Turkeys

After being successfully introduced far north of its historic range, could this bird thrive elsewhere in our chilly state?

BY ANDREW MCKEAN



MY BACK WAS CRAMPING AGAINST the scabby bark of the ponderosa pine, but I didn't dare squirm. A tom turkey was pumping his head up and down just 40 yards away, behind a screen of blooming hawthorns, and he was getting suspicious, wondering why he could not see a hen that would explain the hen calls I'd been making. Turkeys have phenomenal eyesight, and any twitch or even an eye blink on my part would send that gobbler back the way he had come, across a half-mile of peach-colored sandstone, scrub juniper, and sagebrush, into the sanctuary of the heavy timber.

I couldn't scrape another enticing cluck on my box call, cradled in my lap. Or turn my head to meet his wary stare. I couldn't even raise my shotgun, though the bird was now within range. Covered in camouflage clothing and head net, I was hidden only as long as I didn't move an inch.

Then the turkey, which was circling my hiding spot, stepped momentarily behind a pine tree. I shouldered my gun, and when he emerged from behind the trunk, the hunt was over, the dramatic tension of the previous half-hour dissolving with the echoes of gunshot.

I had never called a wild turkey before

that morning, though I had read plenty about how love-struck spring gobblers can be attracted by the right combinations of yelps, clucks, and purrs that mimic the sound of a receptive hen. Though I had practiced using a box call in my basement, I was sure the awful noise I made would appeal more to a kenneled hound than a discriminating tom turkey. So I was shocked when, at first light in those piney woods of southeastern Montana, I actually got a response to my manufactured yelp.

In the ten years since that morning, I've called other gobblers in other woods, and I don't recall the actual shots or the size of the birds as much as the sights of the hunt itself: the neon green of new tree leaves, the yellow haze of arrowleaf balsamroot on open hillsides, and crisp white crocuses emerging from brown pine needles at my feet. Compared to the sterile snowscape of November's deer season, April's fertile turkey woods are downright sensual.

The birds are, too. Toms strut about open areas, puffing out their chest, fanning their tail feathers, arching their wings, and turning pirouettes and circles—all in an attempt to intimidate rivals and appeal to hens. In the spring, the white-and-blue head of male wild turkeys periodically fills with blood and turns a bright red, which contrasts strikingly against the purple-black of the body feathers. To keep rivals from mating with hens, toms will often fight, leaping and kicking to lacerate opponents with their sharp leg spurs.

The male's springtime gobble electrifies hunters and anyone else who has ever heard the thunderous declaration echo through hills and valleys. Created by compressing and releasing air in a complex set of anatomical "pipes," the gobble can be heard for miles, especially from an elevated perch. It's a call to draw hens in for breeding, and a pronouncement of a gobbler's dominance.

A LONG TRIP NORTH

Southeastern Montana's woods didn't always echo with gobblers. Until the mid-1950s, this state had no wild turkeys, and there is no archeological evidence to indicate that the species ever existed anywhere in the West much farther north of modern-day Denver. Various strains of the American wild turkey evolved in the hardwoods of the



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TURKEY TROT A tom turkey jogs along a meadow in northwestern Montana. Previously undocumented in this state, Montana's first wild turkeys were shipped here from Arizona and Colorado in the 1950s and released near Lewistown and Ekalaka. In the 1960s, pen-reared turkeys from Pennsylvania were released in the Flathead Valley and have since spread throughout the area.

East and Southeast (the Eastern subspecies), the palmetto swamps of Florida (the Osceola subspecies), the brushy rivers of Texas (the Rio Grande subspecies), and the pine ridges of the Four Corners area in southwestern Colorado and northeastern Arizona (the Merriam's subspecies).

Across most of their native range, wild turkeys were hunted nearly to extinction in the 1800s. But the species began to recover in the mid- to late 20th century as state and federal wildlife agencies across the United States trapped birds from existing populations and transplanted them into unoccupied habitat. Today wild turkeys are found in every state except Alaska.

In 1954, encouraged by successful introductions of the Merriam's subspecies into Wyoming and South Dakota's Black Hills, biologists with the then-named Montana Department of Fish and Game released the state's first wild turkeys in the Judith Mountains north and east of Lewistown. Over the next few years, they also released birds in the Long Pines area south-east of Ekalaka and in the Ashland area. The birds fared especially well in the Long Pines, growing from the initial 18 turkeys to nearly 1,000 in just three years. During Montana's first turkey hunt, held in 1958, hunters shot roughly 100 birds.

Heartened by the department's early success, state biologists began trapping the home-grown turkeys and moving them to new areas. Bob Greene, a state wildlife biologist in the 1950s, was a key player in Montana's wild turkey restoration efforts. The state's main turkey trapper during those early years, Greene still marvels at how the birds thrived in most initial release sites.

Andrew McKean is an FWP information officer at Glasgow.

"Those birds took in every place we ever put them, almost without fail," says Greene, now retired and living in Warm Springs. "I think the success was partly due to gentle weather and good nesting cover, but mainly it was food. We tried to put them in habitat that was like what they came from, with yellow pine and a good grass understory."

Over the next 30 years, the department moved more than 1,500 turkeys to sites across Montana, sometimes supplementing existing flocks but more frequently putting turkeys into new habitat.

Turkeys are adaptable birds that can survive in a range of conditions. The basic habitat requirements are mature trees for roosting, nearby grassy cover for nesting, and accessible food and water. The birds are opportunists, eating anything from worms and beetles to berries and grains.

Like other upland birds, wild turkeys are vulnerable to certain weather conditions. Too hot in the spring, and chicks can suffocate in their eggs. Too wet and cold after they hatch, and the young birds might not find enough insects to sustain them in their first few weeks. Wild turkeys also can't survive many winters without brushy sanctuaries to escape the wind and locate

food not covered in snow. If the weather stays too cold for too long, turkeys can't maintain their core body temperature, especially if high-calorie foods are hard to find. However, in areas where supplemental food is available, such as from ranchers' haystacks or silage pits, turkeys can generally make it through even the toughest Montana winters.

In some of the state's northern and high-altitude areas, where snow gets too deep or there is little ranching or agricultural use, the transplanted birds didn't survive. But in many areas, wild turkey flocks have grown enough to support regulated hunting seasons.

In the core turkey habitat of southeastern Montana, where I shot my first Merriam's tom, hunters may kill two gobblers in the spring season. Hunting is also allowed in much of western Montana (though by special permits valid only for defined areas), and turkey numbers are increasing in the lower Clark Fork River and Libby areas and the Bitterroot and Yellowstone valleys. Though the department hasn't finished compiling harvest survey data for the last five years, it appears that both hunting pressure and harvest are up significantly, especially for the spring gobbler season. (Hunting is also permitted in the fall, when either a male or a female turkey may be shot.)

COULD THERE BE MORE?

Like other wildlife species restored to unoccupied habitat—including elk, pronghorn, and Canada geese—the introduction and spread of wild turkeys in Montana is one of the state's wildlife management success stories. Currently, wild turkeys live in at least a portion of most counties due to natural migration or state transplants.

Yet there may be potential for turkeys to occupy additional habitat in Montana and for more people to enjoy the sport of turkey hunting. Dale Manning thinks so. Vice president of the National Wild Turkey Federation's Montana chapter, Manning would like FWP to beef up its trap-and-transplant program to fill unoccupied habitat.

"Montana's best habitat already has turkeys, but there is unfilled habitat in many western valleys and foothills where they could do well," says the Missoula taxidermist.

Greene isn't so sure that would work. He has observed how transplanted wild turkey flocks descend on livestock feeding operations during the winter. The hungry turkeys peck seed heads out of stacked hay bales and even run feedlot cattle away from silage and grain. Greene says the only reason some of those flocks survived is that landowners put up with the depredation.

Landowner tolerance remains a key factor when FWP considers turkey releases. Because the birds are such charismatic creatures, most people like seeing a few turkeys.

**If the weather
stays too cold for
too long, wild
turkeys can't
maintain their
core body
temperature....**

But as the initial Long Pines flock demonstrated, turkey populations can explode in just a few years, and a handful quickly can become hundreds. Wildlife managers are leery of putting new flocks in areas where the birds might become nuisances to landowners, even if the habitat is suitable.

That's what happened in northwestern Montana's Flathead Valley, where a flock of pen-raised Eastern subspecies turkeys was released in the early 1960s. The valley's small-scale livestock operations and hobby farms provided supplemental food, and turkey populations boomed. But so did nuisance complaints. FWP started a widespread spring turkey hunt there in 2002 to reduce the flock size and scatter birds away from farms and homesteads.

Because wild turkeys need large tracts of habitat, suburban sprawl is another factor limiting their spread. According to Jeff Herbert, assistant chief of FWP's Wildlife Division, the department has been reluctant to expand turkey populations to areas where prime turkey habitat is being replaced by subdivisions and strip malls.

Between 1990 and 2003, fewer than 300 turkeys were moved into new sites, partly because the department did not want to create more nuisance problems and partly because, says Herbert, "the best habitat is already occupied by turkeys."

Manning, however, argues that FWP could do more to find new release sites in addition to the dozen the agency has already approved for future releases. He and other wild turkey advocates also want the department to take more interest in how existing flocks are faring. They say state biologists should survey populations, collect better harvest data, and conduct gobbling routes similar to the spring crowing surveys used to chart pheasant population trends. And the department needs to develop a wild turkey management plan that outlines population and distribution goals.

"Turkey hunting is one of the fastest growing hunting activities in the country, and Montana is becoming known as a destination state," Manning says. "Can our existing populations handle more hunting pressure? If so, how much more? We currently don't have any consistent ways to



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answer those questions."

Though Herbert agrees that FWP could do more, he notes that the department is still trapping and transplanting birds, "though not at the level some might want." He adds that the department has signed up Block Management Areas containing turkey

NOT QUITE YET A hunter waits for two toms to part so he doesn't wound the half-hidden bird when firing at the front one. Turkey hunting is similar to early-season elk hunting in that both species must be lured in with enticing calls, and both are exceptionally cautious animals, requiring stealth and patience.

populations to provide increased hunting opportunities, and it is working with ranchers to develop rest-rotation grazing systems in southeastern Montana to benefit turkeys and other wildlife species. A lack of staff, he adds, restricts the department from doing much more.

When it comes to putting turkeys into previously occupied areas, Herbert says the department needs to scrutinize each site before attempting any releases.

"If we've tried to put birds in there in the past and they're gone now, that says something about limitations of the habitat or changes that have taken place since the introduction," he says. "Studying those limiting factors would be far more productive than simply releasing more birds back into that area."

Herbert adds that FWP is more open to transplanting turkeys into new, suitable habitats that haven't been tried in the past: "If there have never been birds in an area, and important habitat components are in place, then certainly it's worth trying."

Herbert says the department would welcome help moving birds and then monitoring their populations in the new release sites. "That strikes us as a good use of volunteer assistance," he says. "We're just not keen on introducing and managing birds in marginal areas, which would become a put-and-take scenario, not responsible wildlife management."

As for a wild turkey management plan, Herbert agrees that such a document could help outline management issues and potential strategies for achieving goals. But a more pressing priority is for FWP to finish its upland game bird management plan, which will include a section on wild turkeys.

"We've recently hired someone to take the

lead on the plan, and he can certainly work with Wild Turkey Federation members to include their concerns," Herbert says. He adds that FWP will consider producing a separate wild turkey plan in the future if time and funding permit.

"If we didn't have such a rich array of hunting opportunities, or if we had limited species like other states, then turkeys would be a larger part of our management responsibility," he says. "Even though it's popular with some hunters, turkey hunting is still a small component of Montana's overall hunting opportunities."

It may be small, but Manning and others believe that it could be bigger. And that more people should get the chance to call in a big gobbler, to hide beneath a tree, heart pounding, and wait for the cautious bird to move within shotgun range.

It's an opportunity both FWP and turkey advocates want to promote.

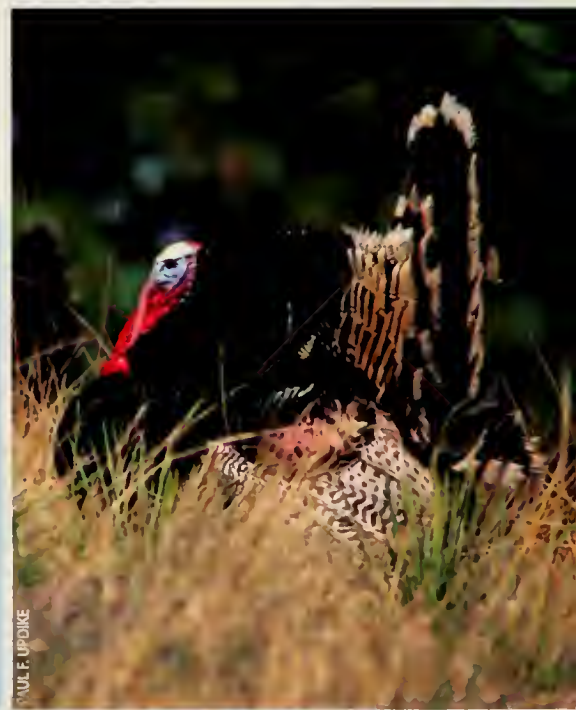
On a recent Montana wild turkey hunt, ten years after my first one, I sit alone on a timbered ridge overlooking the serpentine Tongue River, as thankful for the solitude as I am

TALKING TURKEY Wild turkey advocates have told Montana FWP that they want the department to do more for their favorite game bird. The department replies that it currently lacks staff to increase wild turkey management activities much beyond what it is doing now. Both agree, however, that the wild turkey introduction has been one of Montana's great wildlife management success stories, and that there could be additional habitats elsewhere in the state to further that expansion.

for the warm gobbler at my side. I was up well before dawn, and the noontime sun is making me drowsy. It's tempting to nap here awhile, but I have to get back and break camp.

While picking my way down the ridge, I hear a gobble in the distance. I can't imagine these woods without that sound, which to me has become as much the anthem of spring as a rutting elk's bugle announces the arrival of autumn.

But whether such gobblers fill the woods in new Montana sites depends on many factors. Weather will need to remain mild during most winters, and quality habitat must be preserved. But most important, turkey advocates and FWP will need to work together. These great birds are still relative newcomers to Montana, and they need all the help they can get in what continues to be an often inhospitable landscape. 🦃



WULF F. UPOJKE



PHIL FARNES

High wire act

By Sam Curtis

IN 1994, SAM MILODRAGOVICH was on his way to work as a meter reader for Montana Power Company when he saw a nest-building osprey dropping sticks onto a power pole that had wires crossing the Clark Fork River in Missoula. Concerned for the safety of the bird and the people floating in the river below, Milodragovich alerted others in the company to the problem. A few days later, linemen erected a wireless pole topped by a platform and then moved the osprey's nest to the new site.

The incident ushered Milodragovich into a new career.

Having earned a degree in environmental biology, he had once considered getting a companion degree in engineering so he could build things to benefit the environment. Instead, he'd begun reading meters for the utility to support his family. But when a position as a company biologist opened up a few months after the osprey episode, Milodragovich applied and was hired.

He's been building things to save ospreys and eagles ever since.

"The problem with raptors and power lines is too much bird and not enough room," he says.

That first became clear to Montana Power (now NorthWestern Energy) and other utility companies in the early 1970s, when raptors perching and nesting on power poles were often being electrocuted after touching two live wires simultaneously.

"Since then, we've found we can make poles safer for birds by installing barriers to prevent them from landing, insulating items on the pole that can cause electrocution, or stringing new lines farther apart," Milodragovich says.

Typically, ospreys get into trouble when they choose a power pole for a nesting site. Milodragovich usually knows this is happening when birds start dropping sticks on the wires below, which causes a power outage. A line crew then goes to the site and erects a pole with a nesting platform that has bolts sticking up along the edge to keep nesting materials in place. Under the platform, they affix cross arms so the adult ospreys can perch outside the nest. To prevent the birds from going back to the original pole, they install fiberglass pipes above the cross arms carrying the wires.

"In large areas of the state, utilities are providing a limited resource to ospreys, a place for them to nest," Milodragovich says.

He adds that a permit from the U.S. Fish and Wildlife Service allows him to manage osprey nests and monitor their productivity. From an estimated 120 nesting pairs in Montana in the 1970s, the population has increased steadily. "We've had well over 300 nests on our power system alone, and we've produced as many as 144 young birds from these nests in a single year," Milodragovich says.

When it comes to golden eagles, problems with electrocutions arise in areas where food is abundant. Several years ago, high popu-



SAFER LODGING Young ospreys prepare to leave a nest built on a platform erected away from a power pole. Line crews erect the platforms to lure nesting ospreys away from nearby power lines, where the raptors can be electrocuted and cause power outages.

lations of rabbits, prairie dogs, and sharp-tailed grouse attracted large numbers of eagles to a 1,000-square-mile area of central Montana. Many of the raptors were electrocuted while perching on poles to watch prey.

Milodragovich convinced the company to hire a Montana State University graduate student to determine specific guidelines for linemen to take into the field to decide which poles should be modified to protect the birds. Linemen are now retrofitting poles in problem areas, and Milodragovich has shared the findings with his counterparts at other utilities so they also can help protect raptors.

FWP wildlife officials have high praise for Milodragovich's efforts. "If Sam only cared about satisfying company regulations, I don't think he'd be taking the extra steps he does," says Kristi DuBois, FWP Native Species Program coordinator. "He's going the extra mile to help these birds."

Milodragovich is proud but modest when talking of his accomplishments. "I'm a wildlife biologist; that's what I do," he says. "By managing raptors, we've saved a lot of birds and a lot of money by preventing outages and damaged equipment. But this program wouldn't be nearly as successful without the innovation, concern, and follow-through of the linemen. They're the ones out there dealing with the birds every day." 🐾



PHOTOS BY NORTHWESTERN ENERGY

Sam Curtis is a freelance writer in Bozeman.

How to find, harvest, and safely cook Montana's most delectable mushroom

PHOTO BY DRAKE BARTON

On the trail of the elusive morel

By Ellen Horowitz

THEY HIDE UNDER LEAVES, POKE through thatch, bulge under forest duff, ease up from moss, and arise out of scorched earth. You can be close and never see them. Then, one day, you finally stumble upon spring-time's most prized and delicious mushroom. That unique shape and texture now seems unmistakable. You look and see another, then another. The morel hunt is on.

Morels are a common mushroom found in spring and early summer throughout the United States. So prized are the fungi for their nutty taste when sautéed that they sell for up to \$7 per pound fresh and up to \$150 per pound dried. As a result, mushroomers are often as secretive about their "shroomin' spots" as anglers

are about hiding a favorite fishing hole. But anyone can find morels if they know the basics of when and where to locate the mushrooms, how to avoid dangerous look-alikes, and how to prepare them properly.

Morels first appear in spring as the weather warms. According to mycologists (mushroom experts), the magic minimum soil temperature required for morel fruiting is 42.5 degrees. Rather than place thermometers into soil, however, most morel hunters rely on signs of spring to let them know when the fabulous fungi are

popping up. Drake Barton of Clancy says he associates the blooming of calypso orchids around late April and early May with morel season in his neck of the woods. In other parts of western Montana, the time to search is when trilliums, Oregon grapes, or strawberries begin blooming. One Swan Valley resident begins looking in earnest when skunk cabbages flower in April. Some consider the drumming of ruffed grouse or the sweet perfume of cottonwoods as indicators of morel season. And others go out in May and early June whenever rain is followed by two or three warm, sunny days.

The morelling season moves from low elevations to high ones. Montana's first morels show up in river valleys, sometimes as early as mid-April, and the season can last well into summer in the mountains. For medium elevations, the peak of the season ranges from about mid-May to mid-June.

"If a person had to pick a calendar

FUNGI FORTUNE Valued for their delectable taste, morels are sought both for personal use and as a marketable commodity that fetches top dollar in gourmet stores.

CHRIS SCHNEPP/FORESTRYIMAGES.ORG



date for when morels will be out around here,” says Dale Johnson of Whitefish, “Mother’s Day is a pretty safe bet.”

Although Johnson and other serious morel hunters will tell you when to go, they grow more reticent when asked where exactly to find morels. Johnson, who has collected edible mushrooms for 15 years, says it took him 5 years of walking and hard looking before he found a productive morel patch. The whereabouts of that mother lode, he says, shall remain secret.

But it’s no secret that morels are typically found in woods and forests. Cottonwood bottoms along large rivers are favorite haunts for many early-season hunters. Aspen groves and older coniferous forests—ponderosa pine, Douglas fir, grand fir, and spruce-subalpine—all provide potential morel hunting grounds, though rarely above treeline.

Larry Evans, founder of the Western Montana Mycological Association, shies away from speculating on the best forest types for morelling.

“Anytime you make generalizations about where morels should be, one shows up where you don’t expected it,” he says.

Though forests are probably the best place to find morels, they aren’t the only locales where the mushrooms pop up. Evans has picked them on lawns and along garden paths and says the mushrooms can also appear in landscaping bark and old orchards.

Even though morels can be found “almost anywhere,” as Evans puts it, some places are better than others. For example, morels are often found near dead trees. That’s why, long before the last embers of a forest fire are snuffed out by autumn rain and snow, serious morel hunters study maps and make plans for the coming mushroom season.

With the first warm days of May, trucks and cars begin lining roadsides next to burned areas. These are spots a beginner should keep an eye on.

“The commercial pickers are tuned into the big fires and the places that have the best chances of producing abundant morels,” says Rod Hickle, an official with

the Flathead National Forest.

Hickle oversaw mushroom harvesting and permit enforcement following the 2001 Moose Fire. He says the first few weeks at a prime fire site can be chaotic, as commercial harvesters scramble to find productive morel patches. “We had people trampling over each other to reach the best places,” Hickle says.

After two or three weeks, the mob scene abates and amateurs and their families can safely venture into the woods. You might not gather as many morels as earlier, Hickle says, but there will still be plenty, and the picking can last into early August if conditions stay moist.

Part of the mystery behind morels, like many mushrooms, is their ability to pop up overnight. The “mushroom” is the reproductive or fruiting part of the fungus. Its purpose is to produce spores, the mushroom’s equivalent of seeds. Most of the morel’s life is spent underground, where it thrives as a mat of hair-like fibers called a mycelium. A tiny knot of thick-walled cells forms on the mycelium. The knot, or sclerotia, can either grow into a new mycelium or fruit into a mushroom.

Scientists don’t know the exact conditions that force the fruiting body to grow, says Dr. Cathy Cripps, a mycologist at Montana State University. If the sclerotia “decides” to produce a mushroom, it takes about seven to ten days for the primordial—the infant mushroom—to form. The mushroom matures and produces spores

LET THE HUNT BEGIN Though morels can grow nearly anywhere, seasoned hunters focus their attention on woods and forests disturbed by nature or human development. The hands-down favorite hotspot is a forest the spring after a fire. Hunters scour the blackened forest floor for black morels (below center), which poke up here and there from beneath the charred duff. It’s best to wait for warm days following wet ones when trilliums, skunk cabbage, or calypso orchids (bottom) bloom.



CHUCK HANEY



NELSON KENTER



DRANE BARTON

about two weeks later.

Theories abound when it comes to explaining why morels fruit, or push up from underground. Some researchers believe that morels produce fruiting bodies when the mycelium runs out of nutrients to feed on.

Another theory suggests that the mycelium, spreading underground, fruits when it reaches an impenetrable barrier such as a road or path.

"The soil compaction makes a wall that the mycelium can't physically get through," says Evans. "So it throws up a fruiting body and 'jumps' across the barrier with spores. Blooming is an immediate response to losing its life."

Consider fruiting as the mushroom's mad dash to reproduce, one last attempt to ensure its long-term survival.

The stem's role in the process is primarily to lift the cap high enough for winds to carry the microscopic spores. On the typical grocery store button mushroom, spores are released from gills beneath the cap. On morels, the entire cap is the spore-bearing surface. Each pit and ridge in the morel's honeycombed cap increases the surface area and therefore the number of spores released. A single morel produces millions of spores, which is necessary because relatively few ever germinate.

No one knows for sure why morels often bloom so profusely in burns. According to Cripps, morel fruiting after fires is not ran-

dom, but scientists simply "don't know enough about the ecology to make predictions," she says. "But we can say that, given enough moisture, morels will come up."

So you've spotted a morel. Now what? Evans recommends cutting the stem just above ground level with a knife or pinching it off with your fingers. If you pull the entire morel mushroom up, cut off the base to get rid of attached dirt.

Once you get home and are confident that you have morels and not look-alikes (see below), place them in a bowl of lightly salted water for a few minutes to draw out any bugs that might be living inside. Then rinse in fresh water to clean out dirt caught in the crevices and dry thoroughly on a towel. The easiest, and many would argue best way to prepare morels is to slice them in half lengthwise and sauté in butter. The morels will flatten out as they heat up. Eat as is, heap on venison steaks, or use in other recipes. The mushrooms have a nutty flavor and make a great stock for soups. They can also be dried or frozen (cooked or partially cooked) for later use.

Morels are delicious delicacies, but you need to take a few precautions to prevent sickness. Cripps recommends smelling each morel you pick. If it has an off odor, don't keep it. Also, avoid picking morels growing in areas that have been sprayed with chemi-

cals. Mushrooms act like sponges and soak up the toxins.

As is the case with other wild mushrooms, morels should be well cooked. Allergies are another concern. If you are trying morels for the first time, sample just a few to see if you have an allergic reaction such as an upset stomach. Some people also experience problems when combining morels and alcohol, so Cripps advises caution the first time consuming the two together. Eating old morels can also cause a stomachache. Cripps says some people get so excited about collecting morels that they sometimes gather and eat old ones. "It's like eating old, rotten fruit or vegetables," she says. Old morels appear shriveled and have hard, crusty edges.

True morels belong to the genus *Morchella*. Mycologists don't know how many actual species of morels exist, but western morel hunters generally lump them into two types: yellow and black. The caps of true morels can vary in shape and size. Two key identifying features distinguish them from false morels: The lower edge of the cap is fused to the stalk, and true morel caps and stems are hollow when sliced lengthwise.

"If you find lots of 'morels' near melting snow, they're usually not true morels," warns Evans. Sometimes called the snowbank false morel, the *Gyromitra gigas* is not recommended food. It contains traces of MMH, monomethylhydrazine, a self-

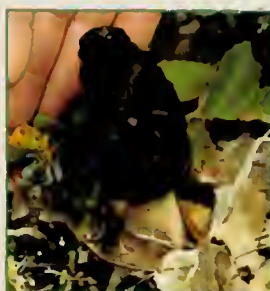
Beware the inedible mushroom

Real morels, which come in yellow and black varieties, are perfectly safe to consume when harvested fresh and cooked thoroughly. But don't pick or eat the inedible morel look-alikes, such as the snowbank false morel or misleadingly named beefsteak morel. And be especially careful of the early false morel. The head of a true morel merges smoothly to the stem, while the head of the similar-looking early false morel hangs over the stem, unattached, like a skirt.



MICHAEL & PATSY FRIBLEY

Yellow Morel
Morchella esculenta



CHRIS SCHNEPP/FORESTRYIMAGES.ORG

Black Morel
Morchella angusticeps



DRAKE BARTON

Snowbank False Morel
Gyromitra gigas



HIROSHI TAKAHASHI

Beefsteak Morel
Gyromitra esculenta



HIROSHI TAKAHASHI

Early False Morel
Verpa bohemica



RON BOGGS

THE MOREL OF THE STORY Experienced mushroom hunters know to carry a bag whenever entering springtime forests, especially ones burned the previous year. Because you never know.

oxidizing chemical used in rocket fuel.

Another morel look-alike, *Gyromitra esculenta*, grows in the same environments as true morels. The common name of this mushroom, the beefsteak morel, gives the wrong impression that it is edible. It too contains MMH and should be avoided. Like the snowbank false morel, its head is usually reddish brown in color and looks like a brain lobe. When sliced in half lengthwise, the stem and cap are not in one piece, as with true morels. Instead, the brainlike cap cascades over the stem.

Another phony morel, called *Verpa bohemica* or early false morel, can grow next to true morels in cottonwood bottoms.

"They look a lot like true morels," says Cripps, "but the cap on *Verpa* overhangs the stem, like a skirt. And the cap may have a ruffled appearance." Although *Verpa* is not considered toxic, "serve it to 25 people and someone is likely to come down with a stomachache," she says. It can also cause muscle spasms in some people.

Though you can strike out on your own with no more advice than what's contained in this article, Cripps suggests that beginner mushroom hunters accompany someone

who knows morels. "Join a mushroom club," she advises.

Both the Western Montana Mycological Association (check out their entertaining website at fungaljungal.org) and the Southwest Montana Mycological Association (also known as the Bozeman Mushroom Club) offer springtime mushroom forays as a way to introduce beginners to wild fungi.

If you want to try morelling solo, bring along a field guide, learn to identify the look-alikes, and, if possible, have someone who knows morels confirm the species before you begin heating up the butter.

Evans describes morel hunting as an "optical challenge." Even if a person knows what they look like, he explains, it takes practice to spot them against a camouflaged background of leaves and sticks.

Once you see one, however, you'll never forget it, says R.J. Devitt, director of the Glacier Institute's Big Creek Outdoor Education Center. Devitt, his wife, and their daughter live in a small cabin near the site of the 2001 Moose Fire. The following spring, morel hunting became an evening outing for the family.

"They were everywhere," he says. "I'd find one and tell my two-year-old daughter, 'It looks like this.' She easily learned to rec-

If you go

When: Anytime from late April to mid-summer, depending on the altitude and climate. Prime morelling conditions are when a few warm days follow a few days of rain.

Where: Woods and forests of all types, especially after fires. Contact national forest offices to find maps of fire areas or locations of prescribed burns.

Regulations and licensing: Licenses are not needed for private land collecting, though trespass laws do apply. On public land, commercial harvesters need a permit. Personal-use mushroom hunters on state lands need a State Recreational Use License. Requirements vary on national lands, so call ahead for details before you start harvesting.

Equipment: Field guide (or this article), a knife to cut stems, and a porous collecting bag, basket, or bucket that allows spores to disperse and prevents mold from forming due to excess moisture.



MICHAEL S. QUINTON

ognize morels and soon began helping us with the harvest."

Morelling is particularly fun with kids. They love to be out in the woods, and the search for "treasure" keeps them engaged for hours. Brenda Kraft of Polson searches for morels several times each week during the height of the season. She grew up hunting mushrooms and today carries on the tradition with her own children, first as toddlers, and now as teenagers.

"It's a family thing," she says. "It's fun and inexpensive entertainment." 

Ellen Horowitz is a freelance writer in Columbia Falls.



CHIEF PLENTY COUPS STATE PARK

Chief Plenty Coups State Park commemorates the great Apsáalooke warrior and his legacy of harmony and goodwill

A PLACE OF PEACE



By Bert Gildart

IN THE MOON OF THE RIPENING WILD plums and chokecherries, a time in September designated by the Apsáalooke people (literally, “children of the big-beaked bird”) to honor Chief Plenty Coups, my wife, Janie, and I joined hundreds of other visitors at Chief Plenty Coups State Park, located on the Crow Indian Reservation south of Billings. Many of us were there that day as volunteers for the Day of Honor, an annual event to celebrate one of the nation’s most venerated Indian leaders. Having arrived a few days before the celebration, Janie and I explored the park, set in the valley of Pryor (Arrow) Creek. Despite being close to the town of Pryor, the park setting was quiet and tranquil. Dusty, dry rimrock cliffs rose up in the north, but the irrigated lawns in the park were green, and tall cottonwoods lined the creek.

As the two of us walked, we were soon drawn to a clear spring that flowed from the base of a large cottonwood tree, the branches of which were laced with hundreds of brightly colored ribbons. There an Apsáalooke historian, Elias Goes Ahead, told us that the objects were prayer flags and that, if we desired, we too could make an offering. We hesitated, feeling self-conscious at this

sacred Apsáalooke site, sort of like Lutherans visiting Mecca. I think Goes Ahead noticed our discomfort, for he reassured us that here all people could be at ease to pray, contemplate, or just enjoy the peaceful surroundings. Though Plenty Coups had once been a ferocious warrior, Goes Ahead said, “later he mellowed and wanted this park to be a comfortable, non-threatening place for Indians and whites. So do as you like. Here you can be part of our culture. If nothing else, pray for peace, and leave an offering.”

Later we did just that, making an offering when no one else was around. We felt free to do so because the quiet, pastoral setting of Chief Plenty Coups State Park creates a hospitable atmosphere of tolerance. After reading about the great chief and visiting with then-park manager Rich Furber (who retired in 2003), we learned why the site is so important, to Indians and whites alike. We learned how a young warrior became a great chief. And how that chief came to represent all that could be good between Indians and whites, despite a long history of mistrust and injustice. We learned that Plenty Coups (*Aleek-chea-ahoosh*, meaning “many achievements”) was a man of war—and then a man of peace—whose vision has helped bridge a gap between two cultures.

“This park,” Furber told us, “expands on that story.”

Chief Plenty Coups is regarded as one of history’s great Indian leaders. A remarkable warrior who often risked his life to gain honor, avenge death, and defend his people,

“I want to leave my property so that the Indian and white man can enjoy it after I am gone. It is to be a memorial not to me, but to the Crow nation....”

—CHIEF PLENTY COUPS, 1927

he later become a renowned diplomat noted for wisdom, eloquence, and compassion.

In 1928, Plenty Coups related his life story to the author Frank B. Linderman. He told his biographer that, as a boy, he had a vision that greatly changed his life and helped save the Crow tribe. After fasting for days, he dreamed of being at a spring surrounded by cottonwoods, where he saw an old man sitting in front of a strange square structure, his face shaded by one of the trees. During that vision he also saw all the land’s buffalo disappear and cattle appear in their place. And he saw a forest destroyed by a storm leaving but one tree, holding the lodge of a chickadee.

Elders who helped him interpret the dream said it meant whites would take over the land once ruled by the Apsáalooke. They said the tree symbolized wisdom, for the chickadee had selected its lodge in a place that would endure storms. The vision

CHIEF OF CHIEFS One of Plenty Coups’s greatest honors came in 1921, when the U.S. War Department chose him to represent all Indian tribes at a ceremony in Arlington National Cemetery creating a memorial to the Unknown Soldier.

CHICKADEE BY JOHN R. FORD



DREAM WATER When Plenty Coups was a boy, he dreamed of visiting a spring surrounded by tall cottonwoods. Later in life, he found that site at what is today Chief Plenty Coups State Park (top). The chief often visited the spring afterwards (above) and later built his house there (below). Before he died, he asked that the site be made into a park where people could gather in peace and harmony.



GARY LEPPART

PHIL FARNES

reinforced for the elders a course they and other Apsáalooke had begun years earlier, one of befriending whites as allies against the other Indian tribes. It was a course Plenty Coups would travel extensively during his later years.

Though Plenty Coups dreamed at an early age of relations with whites, his life as a young man revolved mainly around dealings with other Indians. He took part in many raiding parties, in which he captured horses and otherwise “counted coups” against his enemies, sharpening his skills to become a great warrior. On seven occasions he was the first in his war party to strike the enemy, he captured weapons five times, he led successful war parties on ten occasions, and he was particularly noted for capturing tethered horses, one of the acts of bravery required to become an Apsáalooke chief.

At age 28, in recognition for bravery and leadership, he was made a chief. For years afterward, he successfully led his band in battle against the Dakota, Arapahoe, and Cheyenne, who coveted the fertile Crow country hunting grounds.

Though Plenty Coups’s accomplishments were many, perhaps his most significant contribution was to his people when they were being forced into reservation life. The 1868 Fort Laramie Treaty had reduced the Crow country by nearly 80 percent of what had been guaranteed by the U.S. government just a few decades earlier. And in 1880, some members of Congress tried to remove the Apsáalooke people completely from their lands to facilitate gold mining and the rapidly expanding Northern Pacific Railroad. During six trips to Washington, D.C., as a Crow tribe representative, Plenty Coups successfully negotiated with the U.S. government, railroad companies, and other powerful interests. Meanwhile, he solidified his fractured tribe, uniting them in the common cause to stave off growing pressure for white settlement on the reservation.

So revered was Plenty Coups among the Apsáalooke people that when he died they voted to designate him as their last traditional tribal chief.

Indians weren’t the only ones who recognized his greatness. During his many visits

Writer and photographer Bert Gildart lives in Bigfork.

to the nation's capital, Plenty Coups had earned the respect and admiration of federal officials. His greatest honor there came in 1921, when he was chosen by the War Department to represent all Indian tribes at a ceremony in Arlington National Cemetery creating a memorial to the Unknown Soldier.

Despite such honors, Plenty Coups had mixed feelings about whites. Though many were his friends, many others had deceived his people. But he continued to recall the message of his vision, that only by working with the whites and embracing their ways could the Apsáalooke survive.

"Education is your most powerful weapon," the chief is reported to have told his followers. "With education, you are the white man's equal; without education, you are his victim."

Yet he also advised his people to retain their own culture, continue to speak the Apsáalooke language, honor their ancestors, and participate in traditional songs, dances, and other rituals.

Plenty Coups's hope that the Apsáalooke would adopt the best of both cultures came true. Apsáalooke culture today is very much alive on the reservation. According to Furber, who has been adopted by an Apsáalooke family and has participated in sweat lodge ceremonies, the Indian ways flourish in part because the Crow tribe's reservation is on land they used in historic times. What's more, the tribe has nurtured its culture by maintaining its language and the strong tradition of oral history.

At the same time, many Apsáalooke have followed Plenty Coups's advice to earn advanced academic degrees. According to Furber, if someone in a Crow Reservation crowd were to ask if there were a doctor in the house, "a half-dozen Ph.D.s might raise their hands."

The park commemorating the life of this remarkable man was established in 1965 following several legal transfers. The land was originally donated by Plenty Coups himself. As a young chief, he had visited Mount Vernon and decided his future home should be an Apsáalooke version of George Washington's famous estate, a solemn place to be revered by future generations. When Plenty Coups gave up his nomadic ways in



BERT GILDART

DAY OF HONOR At a ceremony honoring Plenty Coups, his great grand-nephew, Elias Goes Ahead, speaks of the chief's legacy of peace and goodwill. Plenty Coups, who died in 1932 after a lifetime of diplomacy between Apsáalooke and whites, is buried at the state park (bottom).

1884, he became one of the first Apsáalooke to own and settle on a farm, which was deeded to him through the federal Indian Allotment Act. On this 320-acre tract, located a half mile east of Pryor, he opened a general store, built a home, and tilled the earth until his death in 1932 at age 84. At that time, as requested by Plenty Coups and his wife, Strikes the Iron, 195 acres of his land was turned over to Bighorn County to be made into a public park.

It was ironic, Janie and I thought as we strolled the grounds, that this man should want to return land to those who had taken so much from his people.

It took decades for the donated land to become the park Plenty Coups envisioned. Management passed from the county to the Billings Kiwanis Club, which erected a monument dedicated to the chief and a fence to prevent livestock from grazing on his grave site. The State Highway Commission then assumed control of Plenty Coups's cherished land, including his store and two-story log home, which it passed on to Montana Fish, Wildlife & Parks.

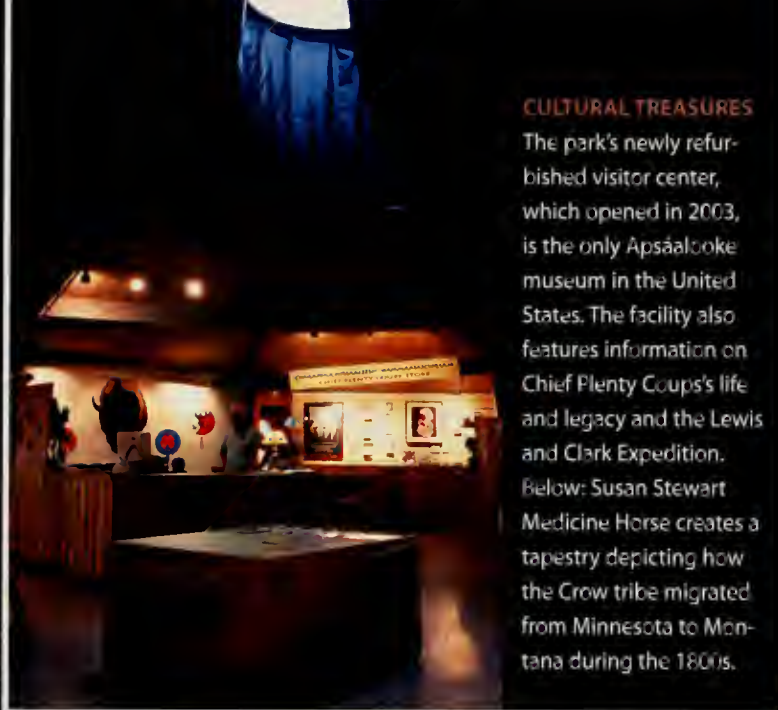
In 1973, the department built a modest interpretive center. The next major improvements came in 1999, when the legislature—urged by a local parks support group called Friends of Plenty Coups—allocated to FWP \$500,000 that was desperately needed for improvements. The department then hired award-winning designers John and Nancy Hanna to create new interpretive exhibits. To manage the park, FWP enlisted Furber, a retired but still energetic Montana game warden captain. Over the next two years Furber, FWP regional parks manager Doug Habermann, and the Hannas met with vari-



CHIEF PLENTY COUPS STATE PARK



JEFF ERICKSON



CULTURAL TREASURES

The park's newly refurbished visitor center, which opened in 2003, is the only Apsáalooke museum in the United States. The facility also features information on Chief Plenty Coups's life and legacy and the Lewis and Clark Expedition. Below: Susan Stewart Medicine Horse creates a tapestry depicting how the Crow tribe migrated from Minnesota to Montana during the 1800s.

ous members of the Crow community and asked them to help the department decide what a visitor center should look like and how to interpret the park and its artifacts for visitors.

"One elder, Joe Medicine Crow, convinced us the new center needed to depict a door facing east, because all traditional Apsáalooke lodge doors face the rising sun," says Habermann. "And many Apsáalooke people told us we needed to broaden the story told at the center beyond Plenty Coups to include other great Apsáalooke leaders and the entire Crow nation."

When the park's new visitor center opened in August 2003, visitors found much-expanded interpretive displays, not only in the center but also in the chief's home and store. Outside the center sits a prominent bust of the chief, showing a scar on his chin (one of the few wounds he ever sustained despite decades of battle). Inside are interactive Apsáalooke cultural and historical displays, where kids and adults can paint an Indian "pony," touch Indian artifacts, and take the "Chickadee Challenge" to test what they have learned.

"One important reflection of Apsáalooke culture is the use of spoken interpretation through the 'sound sticks,'" says Habermann. These are portable MP3 players that allow visitors to roam the park while listening to recordings of Apsáalooke elders talk about their history and the significance of Plenty Coups and his homestead.

In addition to Plenty Coups's preserved home and store, nestled beneath stately cottonwood trees in the valley of Pryor Creek, the park preserves the famous spring Plenty Coups saw in his vision, including the tall cottonwood tree he saw shading the face of an old man, who elders had told him was actually Plenty Coups himself.

Perhaps one of the most significant functions of the visitor center, which is the only museum of Apsáalooke culture in the United States, is to store items sacred to the Apsáalooke people, including several dozen medicine bundles. One of those is Plenty Coups's war bundle, which contains the legs of his spiritual guide, the chickadee. Before battle, Plenty Coups would remove the legs and tie them in his hair for spiritual protection and guidance. The park has been working with tribal members to develop guide-





BERT GILDART

lines for the respectful handling of these and other items following guidelines from the 1990 Native American Grave Protection and Repatriation Act.

The next morning, as Janie and I continued to explore the park, we met many people preparing for the annual Day of Honor, which features the reenactment of a famous battle, a craft fair, speeches by Apsáalooke elders, and a bison feast. Out on the lawn, Apsáalooke elder Oliver Costa showed us how he was setting up a tepee in the traditional manner. Inside the visitor center, Susan Stewart Medicine Horse had hung two deer-hide tapestries she had made. She explained that one depicted the Crow Migration, the tribe's journey during the 1800s from its origins in what is now Minnesota through Canada and Utah and then into Montana. The other showed the Apsáalooke version of the world's creation. In Plenty Coups's two-story house, Crow tribe member Howard Boggess was preparing to provide one-on-one interpretation for the hundreds of visitors who would be stopping by the structure later that day.

As the afternoon waned, young Apsáalooke men from the local high school dressed as warriors began assembling on the fields once farmed by Plenty Coups. They had come to reenact the famous Arrow Creek Battle of 1861, in which vast numbers of enemy warriors attempted to drive the Apsáalooke from the region. Soon, the reenactors were chanting loudly and galloping bareback toward the enemy riders. At

first, the Apsáalooke retreated, which represented the overwhelming odds. Then a "mystic" rider emerged. According to Apsáalooke legend, he had been immune to arrows and bullets during the battle. We watched as the young Apsáalooke riders, heartened by the appearance of the invincible horseman, turned their mounts and surged forward. Thrusting out their sticks, they then touched the enemy warriors (another form of counting coups) in a gesture that symbolized their victory in the battle.

The Apsáalooke have faced many challenges since the bison disappeared in the late 1800s. Yet their historic culture has survived, and many have adapted to the new one thrust upon them. Chief Plenty Coups State Park, designated as a National Historic Landmark in 2001, celebrates the legacy of these adaptable people and one of their most brilliant leaders. Plenty Coups was a farsighted chief who, during his life and afterwards, helped bring together two cultures sharing a common land.

Dr. Philip Beaumont is an Apsáalooke elder who was present in 1928 when Chief Plenty Coups donated his property as a park. At that ceremony, Beaumont says, all white people sat on one side and Indians on the other. But these days, Indians, whites, and people of other cultures mingle comfortably in a setting that encourages quiet reflection on the past while healing wounds made by decades of cultural conflict and mistrust.

"Now," says Beaumont, "there is peace and harmony." 🐾

RIDING INTO HISTORY Young Apsáalooke horsemen reenact the Arrow Creek Battle during the annual celebration honoring Chief Plenty Coups. Members of the Crow tribe also take part in dances, singing, and storytelling during the popular event, held in early September.



BERT GILDART

PLENTY COUPS STATE PARK

Dates and Hours: Open every day May 1 through September 30, 8 a.m. to 8 p.m. The visitor center is open 10 a.m. to 5 p.m.

Location: 32 miles south of Billings on County Road 418 to Pryor, then follow the signs for 1 mile west.

Day of Honor: Held the first Saturday in September (September 4 this year).

Crow Lifeways: Presentations on traditional Apsáalooke culture. Saturdays in late summer (July 31 and August 7, 14, and 28 this year).

Park information: (406) 252-1289, or on the Internet at fwp.state.mt.us/parks.

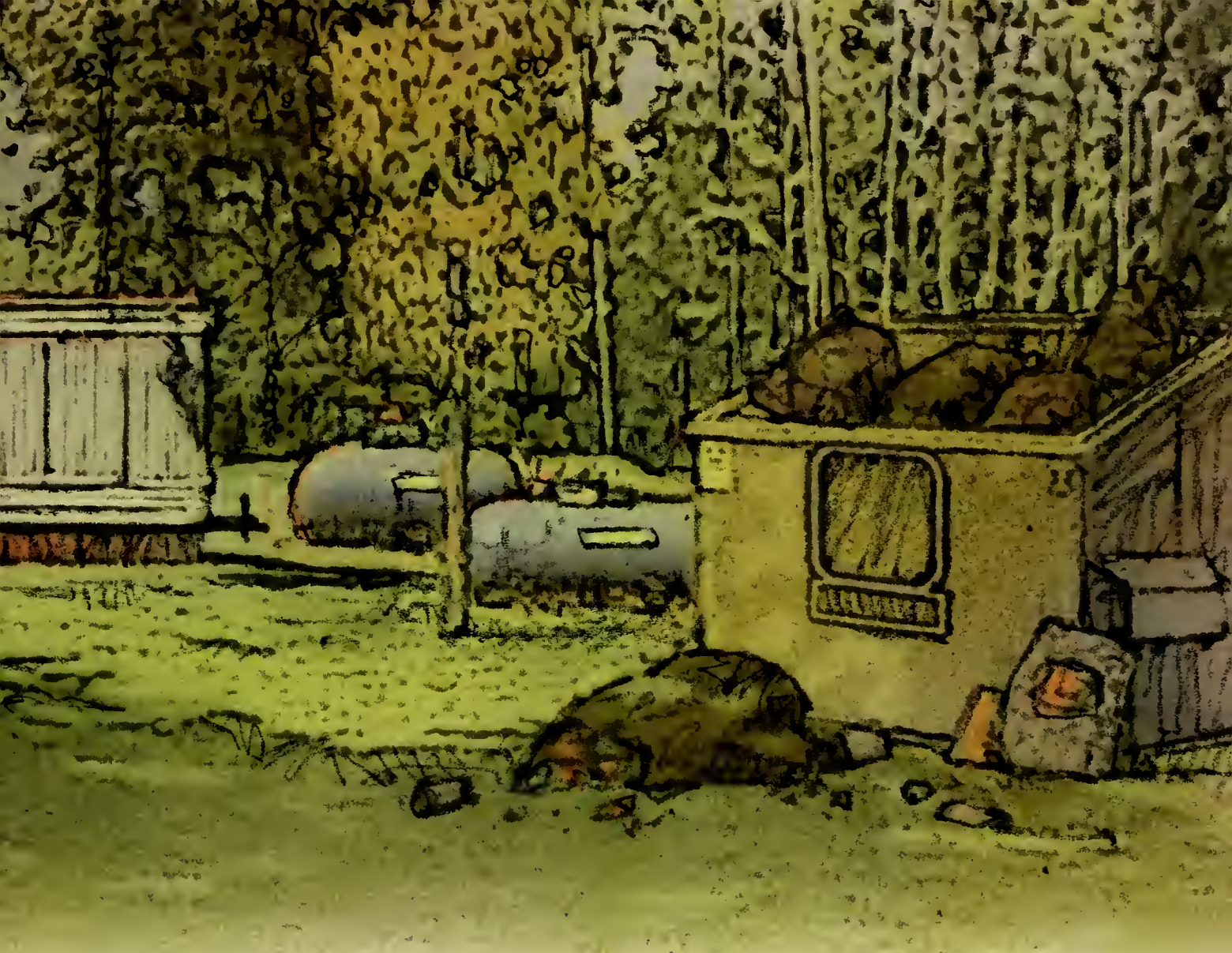


Death by Garbage

By Bill Schneider

Illustrations by Ron Finger

How trash, dog chow, bird seed, and other food attractants along the urban interface are “killing” grizzlies and stifling the bears’ natural expansion



SOME TEENAGERS TEND TO GO A LITTLE wild at times. Pumped up with hormones, they can be fearless, believing in their invulnerability, and are often struck with an incurable wanderlust. They also disrespect their parents and other authority figures. Searching for a place in society, they are (in their opinion only) wise beyond their years. Yes, some teenagers are like that—and some teenage bears, too.

Take the Ninemile Grizzly, for example. Several years ago, this young punk of a bear got himself into trouble not too far north of Missoula. He stole. He destroyed. He scared the daylights out of people. Finally, he was “removed from the bear population,” as wildlife managers call it. But he wasn’t entirely to blame. The Ninemile Grizzly had human accomplices who lured him to his doom. And until these people change their ways, more and more grizzlies

are likely to meet a similar fate.

The saga of the Ninemile Grizzly began in May 2001, when a bear came down from the mountains on the south border of the Flathead Indian Reservation, about 35 miles northwest of Missoula, and found garbage around homes on Upper Ninemile Creek, a scenic valley about halfway between I-90 and the Flathead River. Until then, this three-year-old bear probably had been hanging out with his mother, eating natural foods and being a good boy. But Mom likely chased away her nearly grown son so she could start a new family, and the boy bear struck out on his own.

Like some teenagers—human and bear alike—he immediately ran into trouble. He got hooked on bear drugs, an uncontrolled substance otherwise known as garbage. Once addicted to garbage, it seems, bears can’t shake the habit, which eventually leads

to their death—by wildlife authorities, vehicle collisions, or people defending their lives or property. Hence the oft-used adage, “A fed bear is a dead bear.”

When that teenage grizzly first came off the Reservation “Divide” (a mountainous high point between two drainages), it stumbled into the mushroom camps. In 2000, a forest fire had scorched the slopes of Sleeping Woman Mountain, launching a bumper crop of much-prized morel mushrooms the following spring. Roughly 200 mushroom pickers had flocked to the burn area, setting up makeshift camps where they lived in vans and tents with no toilets or garbage disposal facilities. It didn’t take long for bears to catch a whiff. Not only black bears, but also a 375-pound, subadult grizzly soon to become locally infamous.

The U.S. Forest Service manages most of that burned forestland. According to Stacie

DeWolf, who issued mushroom-picking permits, rangers from the Ninemile Ranger Station had known that some pickers would be coming, but the morel crop turned out to be better than expected, and they miscalculated the size and effect of the camps.

Ken Britton, a Ninemile ranger at the time, says that after a week or so, he and other USFS employees put a toilet in at each camp and started picking up trash daily. They also convinced the pickers to store food in their cars at night.

"After that," Britton says, "it wasn't a problem."

But it was too late for what now became known as the Ninemile Grizzly. The teenage bear, which had been foraging on camp garbage for days, was already "habituated to human food rewards," as biologists put it. Now, unlike a wild grizzly that ordinarily would avoid people and development, this one had begun to equate humans and their dwellings with food.

MORE THAN A NUISANCE

On June 1, 2001, Jamie Jonkel got the call he hates to receive. It was from Dave Murray, who two days earlier had been alarmed when a grizzly had tripped the motion detector light at his home near the confluence of Ninemile, McCormick, and Fire creeks.

"We see [black] bears all the time, but this one was a grizzly," Murray had told the *Missoulian* at the time. "It was looking in our son's window." Murray yelled at the bear, and it took off.

But the animal came back the next morning while Murray was loading garbage into the back of his pickup truck. The grizzly jumped right into the truck bed, grabbed a pork chop bone, and ran off.

That's when Murray called Jonkel, a bear management specialist for Montana Fish, Wildlife & Parks, who immediately asked state game wardens to set a culvert trap. Over the next few days, the grizzly visited several of Murray's neighbors, finding food and garbage at most sites. Five days later, the bear returned to the Murrays' place, located

the baited culvert, and trapped himself.

Because the species is officially listed as threatened under the Endangered Species Act, the U.S. Fish and Wildlife Service is ultimately in charge of grizzly bear management. The USFWS created the Interagency Grizzly Bear Committee, a collection of state and federal wildlife management agency representatives, to guide

grizzly recovery efforts—which

includes dealing with troublesome grizzlies.

Now that he had the Ninemile Grizzly trapped, Jonkel knew it was time to call in the IGBC. FWP wardens, working with IGBC coordinator Chris Servheen, fitted the bear with a radio collar and released him in the headwaters of Ninemile Creek, about 20 miles away. Bears don't like to be trapped and transplanted, so the negative reinforcement often keeps them from returning. To drive home the message of "stay wild or die," the wardens fired noisemaker shells when they released the bear. The scare tactics seemed to work. A few days later, an IGBC pilot recorded the grizzly's signal along the Reservation Divide, indicating that the bear may have "reformed" and returned to eating natural foods.

The reform was short lived. On June 10, the grizzly traveled east over the Reservation Divide to near the little town of Ravalli on U.S. Highway 93. There, the bear ran amuck, killing 30 chickens, 3 ducks, a goose, and a peacock at the home of Shawn Andros.

When Andros came home that night, he saw the chicken coop door ajar. Several chickens lay dead on the ground. At first he thought his kids must have forgotten to close the door and that his dog had killed the fowl. But he quickly thought otherwise when a bear stood up in the brush behind the coop. Andros yelled at the bear. It wouldn't leave at first, but then, after more yelling, it walked off.

Andros reported the incident to wardens with the Flathead Indian Reservation, but they figured it was a black bear because he told them he had never seen a grizzly in the



area. No one made the connection with the Murray incident of a few days earlier. Tribal wardens gave Andros rubber bullets and told him to fire them at the bear if it returned.

It did, the next evening. Andros shot at the bear several times and took a video, which Servheen and Jonkel used to identify it as their collared subadult from the previous week. Now they knew for certain they had a problem bear on their hands.

ON A RAMPAGE

This is when life got exciting for the residents of the Ninemile Valley, which once held just a few sprawling ranches but is now crowded with doublewide trailers, cabins, and retirement homes. This remote, scenic valley, with its sparkling mountain stream and horizon serrated by mountain peaks, has become part of what natural resource managers call the "urban interface," where new rural residences pile up against public land near larger cities. And it's where, increasingly, people are coming face to face with bears in their backyard.

On June 17, the Ninemile Grizzly moved west away from Ravalli, over the Reservation Divide and back into the Ninemile Valley. Here he went on another rampage—raiding bird feeders, foraging in open garbage dumps, stealing dog food off porches, killing chickens, feeding on abandoned cattle carcasses, and digging up compost piles.

So often during the next two weeks did FWP wardens, biologists, and volunteers receive calls about the Ninemile Grizzly that it seemed they practically "lived with the bear," as one put it. This was no small

Bill Schneider of Helena is the author of many books, including Bear Aware and the recently re-released Where the Grizzly Walks. Illustrator Ron Finger lives in Minnesota.

Sensing an impending disaster,

FWP held two community meetings to convince residents to remove all food attractants.

task, as the bear kept moving erratically, almost like he was frantically searching for new food sources. The wardens tried to trap him again, but by the time they moved a culvert trap into place, the bear would be gone. A few times they spotted the grizzly and fired cracker shells, but this “aversive conditioning” didn’t work.

As the biologists and wardens chased the bear from one home site to another, it became obvious why the grizzly was hanging around and refusing to leave.

“We found some horrendous examples of human-related food rewards,” says Bill Thomas, an FWP information officer at Missoula. “There were truckloads of kitchen garbage at [some] residences.”

Sensing an impending disaster, FWP held two community meetings to convince residents to remove all food attractants. Thomas and other department employees even went door-to-door to talk to valley residents.

“We’d wake up folks in the middle of the night and ask if we could move their garbage inside,” he says.

Many people understood the problem and immediately removed garbage and other bear-enticing foods. But others wouldn’t change until the bear was already feeding on their land. By then, says Thomas, the grizzly had received yet another food reward near human habitation, reinforcing a downward spiral that was about to come to a dead stop.

On June 30, the Ninemile Grizzly lumbered into an enclosed porch looking for pet food, which it had done before. This time, however, the porch was occupied by a

woman watching TV. Even though the bear didn’t act aggressively, members of the IGBC decided it had grown too bold, too dangerous, and that they could not allow the rebellious teenager to become an adult.

By now, however, the Ninemile Grizzly had become so savvy that killing it would not be easy. The bear had learned to avoid traps and gun-wielding officials. But he couldn’t escape, not with the radio collar sending out his exact location to wardens. They tracked the bear twice down to I-90 before it went back north into the Ninemile Valley. Then, on July 1, the Ninemile Grizzly did two things no grizzly had ever been documented doing. It swam across the Lower Clark Fork River, and then it crossed the interstate.

To those who want to repopulate the Bitterroot Mountains with grizzly bears, this was a dream come true, because a viable grizzly population in the Bitterroot Ecosystem would be a giant stride toward complete recovery of the species. The Bitterroot Ecosystem encompasses 15 million acres of unoccupied grizzly habitat, which would allow the population to expand to a point where the species likely could be removed from protection of the Endangered Species Act.

However, the wayward subadult did not continue south into the Bitterroots to help form the foundation of a new grizzly population. Instead, he headed to the nearest chicken coop and killed more fowl before traveling back north across the freeway and river. But this time, instead of returning to the Ninemile Valley, he went northwest toward Superior, about halfway between Missoula and the Idaho border. There, wardens finally caught up with him, and several rifle shots later the Ninemile Grizzly’s saga had ended.

MORE DEAD GRIZZLIES?

Get ready for more Ninemile grizzlies throughout western Montana. Bear biologists believe grizzly populations in the Greater Yellowstone and Northern Continental Divide ecosystems are expanding. The bears are now showing up where they haven’t been seen for 50 years or more.

Many of these places were once isolated outposts that have since become rural communities. The people who have built there

didn’t think they were moving into grizzly country. Now they must learn to live with the big bear. If they don’t, each grizzly that comes down off the local divide and gets hooked on garbage will eventually be killed, and the species may never recover.

“Every year, I have a bear like the Ninemile Grizzly,” says Kevin Frey, Jonkel’s counterpart in Bozeman. For example, in 2002 Frey tried to manage a similar grizzly that he trapped and released. But it kept getting into trouble, and the trap-wise bear was involved in 55 “incidents” (anything resulting in a call to the department) before Frey finally caught it again—and had to destroy it.

What’s the solution to depredation problems caused by the expanding grizzly population? Jonkel has an idea that just might work. He’s working with Ninemile Valley residents to form a Neighborhood Watch-type program where landowners learn bear awareness and how to live with wildlife. They apply peer pressure to their noncompliant neighbors to convince them to clean up garbage and other bear attractants before government officials show up.

Jonkel gives out reams of brochures and other information on removing attractants as well as on using cracker shells and rubber bullets so landowners can aversively condition bears. And he frequently (and gingerly) points out that there’s a state law prohibiting people from leaving out anything that might attract bears.

The strategy seems to be working, though slowly, in the Ninemile Valley. Encouraged by these results, Jonkel and FWP’s three other bear management specialists are now trying it in other rural grizzly trouble spots. Volunteer landowner groups, the biologists say, can do much more than state or federal officials ever could. Peer pressure can be a powerful incentive, as everyone who has neglected to shovel their sidewalk, spray their weeds, or mow their lawn can attest.

Maybe someday soon people who leave out garbage, dog food, and other bear attractants will feel that same sense of community-induced shame. And then maybe the Ninemile grizzlies of the future will be able to reach the Bitterroot Mountains and begin helping their species expand farther west and step back from the edge of extinction. 🐻

MONTANA'S AVIAN SPECTACLE

DUCKS, HERONS, SHOREBIRDS, SWANS,
AND COUNTLESS SNOW GEESE
CONGREGATE AT FREEZOUT LAKE
EACH SPRING, CREATING ONE OF THE
NATION'S MOST SPECTACULAR
BIRD-WATCHING OPPORTUNITIES

SPARTASPHOTO.COM



BY
BERT
GILDART

KERRY T. NICKOU

SNOWING GEESE IN RECENT YEARS, UP TO
500,000 SNOW GEESE HAVE STOPPED AT
FREEZOUT LAKE, WHICH LIES WEST OF GREAT
FALLS ALONG THE ROCKY MOUNTAIN FRONT



ON A LARGE PRAIRIE lake roughly 15 miles southeast of Choteau, thousands of snow geese create a clamor that sounds like a distant crowd cheering for a star performer. When the noise reaches the peak of its crescendo, the birds rise from the lake as if endowed with a single mind. It looks like a white mountain separating itself from the earth. Even more absorbing than the birds' deafening noise and astounding numbers is the way each individual goose fits into something much larger than itself. In unison, the flock swells then swirls like a white

tornado, swooping and rising before settling back to the water, always together, as though tightly choreographed. Amazingly, despite the close formation, individual birds rarely collide, or even touch.

Sometimes, a flock completely settles, though it takes little to stir the nervous birds again. And sometimes a flock will rise up and strike out to the north, moving as unstopably as retreating glaciers from the last great ice age.

The snow goose spectacular is just one of many bird-watching wonders to be found at Freezout Lake Wildlife Management Area in early spring. Owned and managed by Montana Fish, Wildlife &

Parks, the 11,350-acre WMA attracts more than a million birds each year, from stately tundra swans to tiny Tennessee warblers.

"We've documented more than 200 different species using the area," says Mark Schlepp, WMA manager.

Though snow geese are the most abundant species—and get the most attention from birders—Freezout also is renowned for concentrations of American avocets, black-necked stilts, and various herons, gulls, terns, sparrows, and phalaropes. The birds are attracted to the area's abundant water and diverse mix of water levels and plant communities. The site is vital to so many migrating species that the

National Audubon Society considers Freezout one of the most important bird areas in the entire United States.

Though Freezout existed long before European settlers arrived in the area, the lake was much smaller than the current one and often dried up. The lake began to expand during the early 1900s, when the federal Bureau of Reclamation began drawing water from the nearby Sun River into a network of canals from which farmers could irrigate their fields. Because Freezout was a low spot on the landscape, excess water from the fields drained into the lake, which, over the decades, continued to grow. By the 1940s, says Schlepp, it was about twice the size it is today and covered what is now U.S. Highway 89.

In the 1950s, to lower water levels and increase wildlife habitat, FWP began managing the lake. The department and the Bureau of Land Management jointly built an outlet that flows to the Teton River to the north, as well as a half-dozen dikes that separated the eastern part of Freezout Lake into six interconnecting ponds. By adjusting water levels in the ponds throughout the year, wildlife managers can create a variety of different habitat conditions. Periodic mowing and prescribed burns help reinvigorate grasses, forbs, and other plants that provide abundant nesting cover around the

NO SPECIES HAS BENEFITED MORE FROM CHANGES TO THE FREEZOUT LANDSCAPE THAN THE SNOW GOOSE.

lake and ponds. Planted alfalfa provides cover and food, and shelterbelts give wintering birds refuge from winds blowing down from the Rocky Mountain Front.

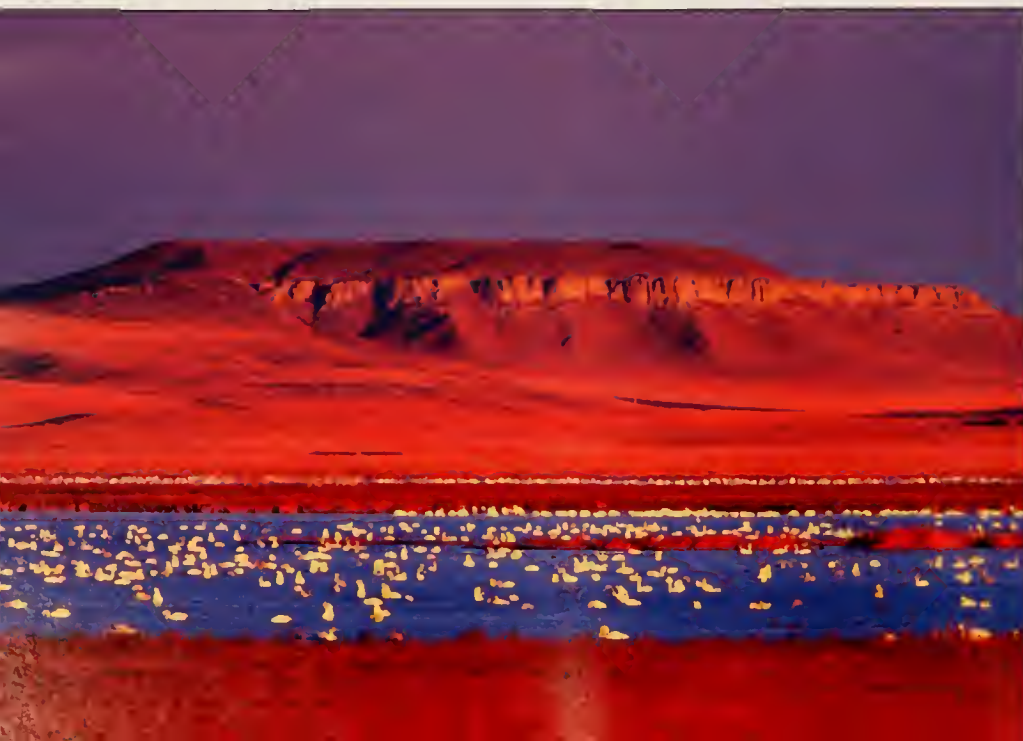
"By managing the water and cover we've been able to provide habitat for the broad array of bird species using this area," Schlepp says.

No species has benefited more from changes to the Freezout landscape than the snow goose. The abundant waterfowl flock to the lake in spring and fall, leaving twice each day to feed on spent grain on surrounding farm fields. Nearby Fairfield bills itself as the "Malting Barley Capital of the World," but it could also boast of being the "World Champion



W. STEVE SHERMAN

THERE'S NO GEESE LIKE SNOW GEESE BETWEEN TRIPS TO NEARBY BARLEY FIELDS TO FEED. SNOW GEESE REST AT FREEZOUT (BELOW LEFT) WITH TUNDRA SWANS. BANNED BIRDS (ABOVE) AND BLUE PHASE SNOWS (RIGHT) STAND OUT FROM THE CROWD. IN FLIGHT, BLACK WING TIPS ARE EASILY VISIBLE TO THE HUNDREDS OF BIRD WATCHERS WHO FOCUS THEIR ATTENTION ON FREEZOUT EACH SPRING.



CHUCK HANEY

Snow Goose Food Producer."

During early April, at the height of the snow goose staging at Freezout, I accompany Dan Casey, who is leading a weekend tour here for the Flathead Chapter of the Audubon Society. Casey, previously an FWP biologist and now a representative of the American Bird Conservancy in Kalispell, maintains that the spring snow goose concentration at Freezout is one of North America's greatest wildlife spectacles, on par with the famous sandhill crane concentration in central Nebraska.

During the Freezout tour, I meet Michael Schwitters of Choteau, a retired Air Force colonel who now works as a freelance bird bander and monitorer. Schwitters says snow



W. STEVESHERMAN



BRYAN GILBERT

geese using the Freezout complex are from three populations—the Wrangel Island (off Russia's northeastern coast), the Prudhoe Bay (Alaska), and the Western Canadian Arctic—identified for where they nest. For the past 14 years, the ardent goose fan has been following snows between their wintering grounds on Tule Lake, in California's Sacramento Valley, and their Arctic breeding grounds. He has recorded nearly 40,000 collar numbers that he reports back to the state, provincial, and federal biologists who banded the birds so they can better understand snow goose movements and migration patterns.

Peering through his spotting scope at a goose-covered stubble field, Schwitters

smiles and says, "There's Tutu," a bird so named for its neck band adorned with the code 2TO. "That's a goose from Russia," he adds, indicating another bird. "I know by the color of the band."

Amid the sea of white we see many blue geese, a darker phase that make up roughly 20 percent of the snow geese at Freezout. Both blues and the regular snow goose varieties have dark wing tips.

When a flock of snow geese arrives at Freezout, the birds settle onto the lake and ponds to rest. The next morning, just after sunrise, they rise and head for the nearby grain fields to feed. A few hours later, at around 10 a.m., the birds return

from the fields to the water, where they drink and rest before returning to feed in mid-afternoon. At dusk, they again return to Freezout to spend the night.

In spring, an incoming flock of snow geese remains at Freezout Lake for an average of about four days before heading to the Arctic. One question puzzling biologists and birders is why snow geese travel up to 2,000 miles to nest, when their close cousins, Canada geese, are content to remain within just a few hundred miles of where they hatch. One theory holds that snow geese grew dependent on a specific cold-climate food base during the most recent ice age and then were forced to move steadily northward as the glaciers began to recede.



KEITH SZATRANSKI

On this brisk spring day, a segment of one flock lifts from the lake into the air with apparent resolve. Strong winds have been forecast, and perhaps the geese sense an impending tailwind. Higher they fly, spreading out into a number of loose but discernible V-like formations as they strike out for the Arctic.

Six months from now, in early November, these flocks will return to Freezout before heading south to California. Accompanying the paired adults will be young geese that hatched in the Arctic. And six months after that, the family groups will fly north once again, stopping

at Freezout to rest and build fat reserves.

The predictable return of snow geese to Freezout can be as reassuring as a much-anticipated family reunion. In a world that seems in constant flux, the biennial reappearance of snow geese and other water birds to this great prairie wildlife area says that many of the world's ancient and most complex natural processes are still very much in order. 🐾

EDITOR'S NOTE: Freezout WMA is 40 miles northwest of Great Falls, just off U.S. Highway 89. Interior roads are open to vehicles from March 15 until late September.

DONALD JONES.COM



W. STEVE SHAWMAN

BOUNTIFUL BIRDING ON SOME DAYS IN LATE MARCH AND EARLY APRIL, FREEZOUT WMA MAY HOLD CLOSE TO ONE MILLION BIRDS. VISITORS WILL LIKELY SPOT AMERICAN AVOCETS (ABOVE), SORA RAILS (LEFT), AND WESTERN GRIBS (TOP LEFT), AS WELL AS SANDHILL CRANES AND VARIOUS PLOVERS AND PHALAROPIES. WATERFOWL ABOUND, INCLUDING TUNDRA SWANS, MALLARDS, PINTAILS, AND SHOVELTERS, ALONG WITH THE UBIQUITOUS SNOW GEES.

Writer and photographer Bert Gildart lives in Bigfork.



CONTROLLING FREEZOUT'S WEIRD WATER

"THIS IS AN EXTREMELY DIFFICULT system to manage," says Freezout WMA manager Mark Schlepp. "For us to maintain a successful wetlands complex, we need to constantly monitor water quality and quantity."

Because the lake eventually drains north into the Teton River, Schlepp and his staff must check salinity and water levels three times each week.

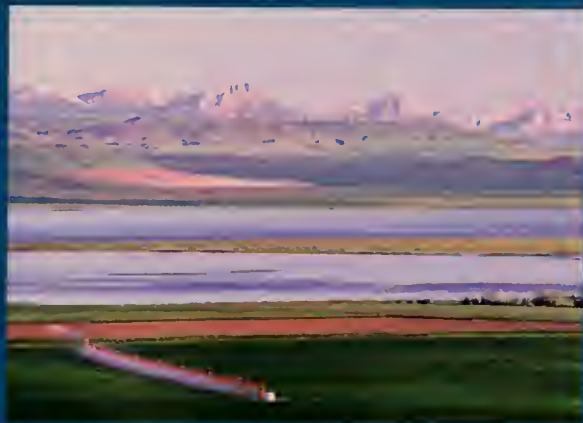
"We have to be sure we don't send too much water into the Teton," he says. "The high salinity from Freezout could really harm the river system."

That hasn't been a concern recently. For the past several years, a prolonged drought has meant that not enough water is reaching Freezout.

"We've got one pond completely dry, others are way down, and the lake itself is only about half what it is in an average year," Schlepp says.

Low water means more than just less habitat for wildlife. For decades, salt and selenium in surrounding soils have been washing down into Freezout. When the lake is low, evaporation is rapid, further concentrating the minerals. High levels of selenium have been shown to deform or even kill birds. "That's the worst-case scenario if this drought continues," Schlepp says.

—Tom Dickson



Salt and selenium from irrigated barley fields drain into Freezout Lake, requiring constant monitoring.

TOUGH LOVE

Why it makes sense to kill some fish in order to save others

BY BRIAN MAROTZ

CASCADE CREEK AT THE OUTLET OF WOODWARD LAKE IN THE 300 MILES-HIGH WILDERNESS, BY MICHAEL A. WOLF

As Roxy Hollopeter settled into his chair, his first words to me were, "Poisoning a stream should be a hangin' offense."

I looked around for a rope, because I didn't think he was kidding. I was visiting the 91-year-old Kalispell resident whose letter to the editor, entitled "Bumbling Biologists," had been printed in the *Daily Inter Lake* newspaper that day. The letter took Montana FWP to task for our proposal to use a chemical fish toxin in some wilderness lakes to kill rainbow and Yellowstone cutthroat trout. The nonnative fish threaten one of the last strongholds of westslope cutthroat trout in the South Fork of the Flathead River.

"Sportsmen and citizens must get together and stop this," the letter had proclaimed, expressing a viewpoint common among those who remember how mining waste and chemicals damaged streams in Montana and elsewhere in the West. "The biologists have already ruined our fishing here with their stream poisoning. There are no salmon flies, mayflies, or hellgrammites left. Fish must eat to live, same as anything else."

But what FWP was doing was entirely different, and I had made the visit to explain the difference to an obviously concerned citizen.

"Hello Mr. Hollopeter," I said, when he

answered the front door. "I'm the 'bumbling biologist' you wrote about in the paper."

"Speak up will ya? Rose! Come help me with this darned hearing aid!" His wife offered me coffee and cookies as she got him situated.

"I saw your letter to the editor in the paper today, and I see we've got something in common," I said.

I'm sure he was wondering, *What could I possibly have in common with a whippersnapper biologist who says he wants to poison streams?* I reminded him that he had written, "The biologists have planted all kinds of foreign fish... rainbow was one of the worst. If we don't keep [those fish] out of the primitive areas, we can say goodbye to fishing and hunting."

That, I explained, is precisely the rationale for our proposal. Many of the 21 lakes FWP has targeted for eliminating hybrid trout over the next ten years are in the Bob Marshall Wilderness. Yes, it may seem preposterous to propose poisoning lakes in a wilderness area. I knew that Hollopeter thought so. But our proposal is not as crazy as it seems, and I wanted him to understand why it makes sense.

Hollopeter told me he was born in 1912. His family came from Oregon by wagon train to the Swan River valley in 1916. Back then, State Highway 83 was a pack trail, with just a few Englishmen and Finlanders homesteading the area. Today the Swan Highway carries RVs outfitted with TVs and air conditioning, and the valley is dotted with a growing number of cabins and retirement homes. Times have changed dramatically for the people in the area.

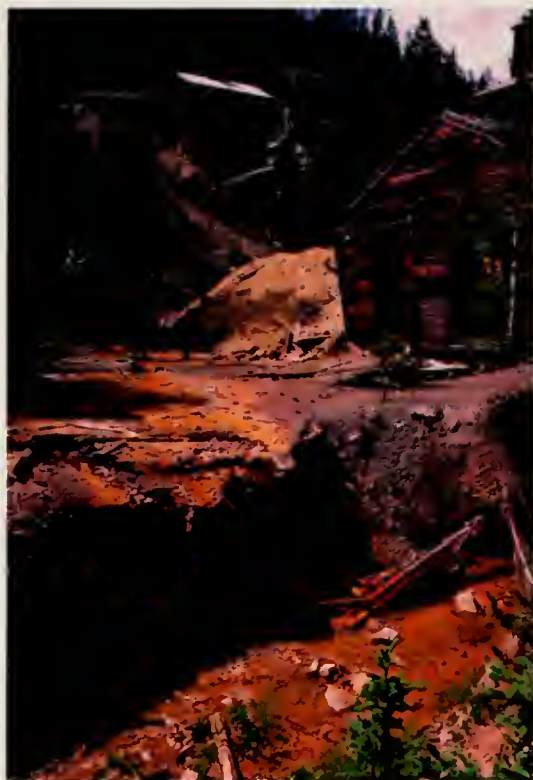
And also for the westslope cutthroat trout, a species first recorded by Lewis and Clark. Once common throughout western Montana, the species has dwindled to roughly 10 percent of its historic range. The main reasons for the decline have been habitat loss, stream siltation, overfishing, competition from introduced fish such as brook trout, and hybridization with nonnative rainbow trout. The South Fork Flathead River upstream of Hungry Horse Dam is arguably the most secure and intact stronghold for the species in the entire United States. Hungry Horse Dam, completed in 1952, has blocked the invasion of nonnative fish species moving upstream. However, the pure-strain cutthroat aren't completely protected from nonnatives or genetically polluted hybrids. Some mountain lakes have been "leaking" hybrids into the genetically pure cutthroat population downstream.

As I explained this problem to Hollopeter, he asked why the cutthroat/rainbow trout hybrids—"mule fish," he called them—were a problem. "Mules are strong," he argued. "What makes mule fish bad?"

It's not that hybrids can't do well in wilderness lakes, I replied, but that they can dilute the genetics of pure westslope cutthroat. We're losing the pure strain awfully fast, and once they're gone, they're gone for good. This species has been drastically reduced in its historic range, and the South Fork Flathead River has become an increasingly important reservoir of genetic purity. We don't want to risk losing that population too, because there should be at least a few places in Montana where genetically pure westslope cutthroats thrive.

LEAKY LAKES Rainbow trout and rainbow-cutthroat hybrids are spilling from the outlets of mountain lakes (left) down into the South Fork Flathead River. There, they could interbreed with pure westslope cutthroat (right), threatening the long-term survival of the native species in one of its last remaining strongholds.





HANGIN' OFFENSE Some concerned Montanans, such as Kalispell resident Roxy Hollopeter (above), have opposed fish removal for fear it will ruin streams and lakes, similar to when copper and silver mines (left) damaged waters throughout the state. FWP biologists maintain that chemical fish removal is the only way to rid some wilderness lakes of rainbow trout, originally stocked by horse and barrel, which are interbreeding with native westslope cutthroat trout.

"Protecting the remaining cutthroat is the only way we can retain a pure gene pool if we want to restore wild spawning runs in their historic range," I added.

Even the state's captive cutthroat brood stock (fish that produce eggs and young fish that are reared and then stocked) held at the Washoe Park state fish hatchery in Anaconda periodically need to be infused with wild genes to maintain genetic diversity and wild behavioral traits. Last May, FWP biologists captured wild westslope cutthroat males from streams in the South Fork to fertilize eggs from the brood stock.

Hollopeter agreed it made sense to protect such a valuable native species. "There should be someplace left for every creature in nature," he said.

Then he began to reminisce about years ago when westslope cutthroat were abundant in local streams.

"Once, when I was a kid, there was so much splashing going on in the creek out back I had trouble sleeping," he said. "I got down there early next morning and saw so many cutthroat trying to spawn that all I could see was fish and no water."

I agreed such a sight should be available to

people in the future and explained that's what FWP was trying to preserve. Still, he wasn't convinced. It was the poisoning aspect that stuck in his craw. "I've seen what those wildcat minnets did to Snowshoe Creek, near Libby. The rocks looked painted red and the insects died and never came back. Now you biologists want to poison more!"

Then he recalled how federal officials once tried to wipe out wolves, coyotes, and porcupines.

"They used 10-80 [poison] hanging in salt blocks to kill the porcupines," he said. "It worked well, but the rain made the poison run to the ground, so it killed lots of deer and elk, too. The coyotes died when they ate the porcupines, and birds died when they ate all those carcasses. Man thinks he knows best, but nature only works when we leave it alone."

For the most part, I agreed. People often make a mess of things trying to "improve" the natural world. But the project FWP was proposing was designed to correct a problem already set in motion by humans long ago: the introduction of nonnative fish into waters where they don't belong.

Next, I told Hollopeter about the compounds being proposed for fish removal. Biologists have selected rotenone and antimycin as the preferred toxins because

the chemicals break down rapidly and only kill gill-breathing organisms (by preventing oxygen from crossing the gill filaments). Even though an eagle or osprey that eats a dead fish isn't harmed, FWP removes all floating fish after a chemical treatment to prevent scavenging. We also use potassium permanganate to neutralize the toxin at a lake outlet so that gill-breathing creatures downstream aren't harmed.

As heavy-handed as our project seems, chemical fish removal has a proven track record worldwide as a safe and effective fish management tool. No other technique—netting, no-limit fishing regulations, electroshocking—can completely rid a lake or stream of fish. And if you don't remove them all, they will soon repopulate. If there were any other way to protect native westslope cutthroat, we'd do it.

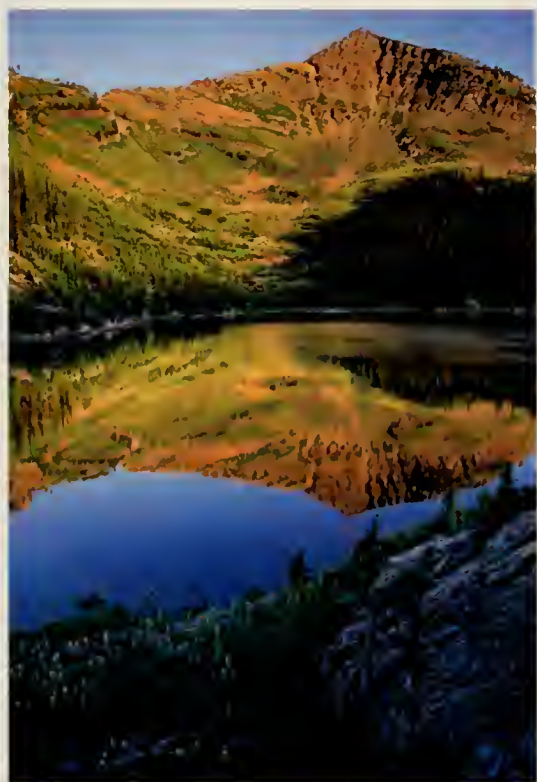
"It's like if you had knapweed in your yard," I said to Hollopeter. "You'd want to keep it from spreading. We're doing the same thing with antimycin and rotenone, to surgically remove those 'weed fish' in some lakes and streams."

Like many gardeners and farmers, Hollopeter was familiar with rotenone.

"Heck I've swam cows through it, used it on my garden," he said.

Then he paused. "But if you kill all the

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MICHAEL J. WOLF

BEST OPTION? Delivering antimycin to lakes from helicopters is cheaper and less harmful to fragile lakeside vegetation than using pack mules. Some wilderness advocates argue the chemical should not be used in the Necklace Lakes (right) and other wilderness waters, but FWP biologists say antimycin treatments are the only way to protect westslope cutthroat populations downstream. After fish removal, FWP would stock pure-strain cutthroat reared in state fish hatcheries (above).

insects and little shrimp, what will the fish eat when you put fish back in the lake?"

It's true the chemicals can kill gill-breathing invertebrates as well as fish, but the insect populations rebound rapidly. When we do a fish removal, we document the entire species assemblage in the lake or stream before treatment and do all we can to make sure every species rebounds afterwards. Lakes are treated just before ice forms in the fall, and the hatchery-reared pure westslope cutthroat are then placed in the lake in spring. Because many amphibians leave mountain lakes during fall, or burrow in the lake bottom until spring, they don't get hit with the toxins. And FWP lab experiments show that amphibians can survive the low concentrations of chemicals we use to kill fish. We also ensure that some small fish are available for fish-eating birds by stocking small cutthroat.

Hollopeter was familiar with planting fish in wilderness lakes. He and a U.S. Forest Service horse packer planted the first cutthroat trout in Van Lake, in the Swan Valley, back in the late 1920s. Back then, both cutthroat species—westslope and Yellowstone—were lumped together as "western spotted trout" or "royal native black-spotted trout." No one realized or cared that the two native species might crossbreed and threaten each

other's existence.

Hollopeter told me he was also hired to help plant rainbow trout in Smoky Lake (now part of what are called the Necklace Lakes) and Lena Lake. I remarked that those lakes were now being considered for chemical treatment because the rainbow trout threaten the pure westslope cutthroats farther downstream in Big Salmon Lake, in the heart of the Bob Marshall Wilderness.

He put his head in his hands when I told him this. But I wasn't blaming him. He had just been doing his job, and back then people didn't know about the problems of fish hybridization.

I then told Hollopeter about other parts of the project that were being debated. The Bonneville Power Administration, the U.S. Forest Service, and FWP are jointly preparing an Environmental Impact Statement for the lake rehabilitation project. One of the questions posed by the EIS is whether it is appropriate to use aircraft to carry the toxins to lakes in wilderness areas.

The main concern is that airplanes or helicopters would ruin the quiet wilderness experience for hikers. The counterargument is that pack stock, which can be used to carry the toxins and equipment to some lakes, aren't allowed in the Jewel Basin

Hiking Area, which has lakes proposed for rehabilitation. And some wilderness lakes have no trails at all and can only be treated using aircraft. Also, the horse traffic and prolonged human activity needed to treat lakes from the ground can damage fragile vegetation more than aircraft treatments would. There is also cost to consider, and aircraft treatments are less expensive.

Another question raised by the EIS and many wilderness advocates is whether or not lakes that historically had no fish should remain fishless after nonnative fish are removed. The argument there is that a fishless condition is the true way to recreate the wilderness setting for these lakes.

Yet many people now consider catching native fish in a remote lake, even if historically there were no fish there, as an important part of their wilderness experience. Moreover, it's nearly impossible to keep a lake completely fishless. If just two non-native trout of the opposite sex survived the treatment, then the problem population could recover, requiring additional chemical treatments. Then there's the possibility that someone angry about the lack of fish might stock a lake illegally, potentially introducing a problem species or a fish disease. Any of these possibilities would compromise the goal of protecting

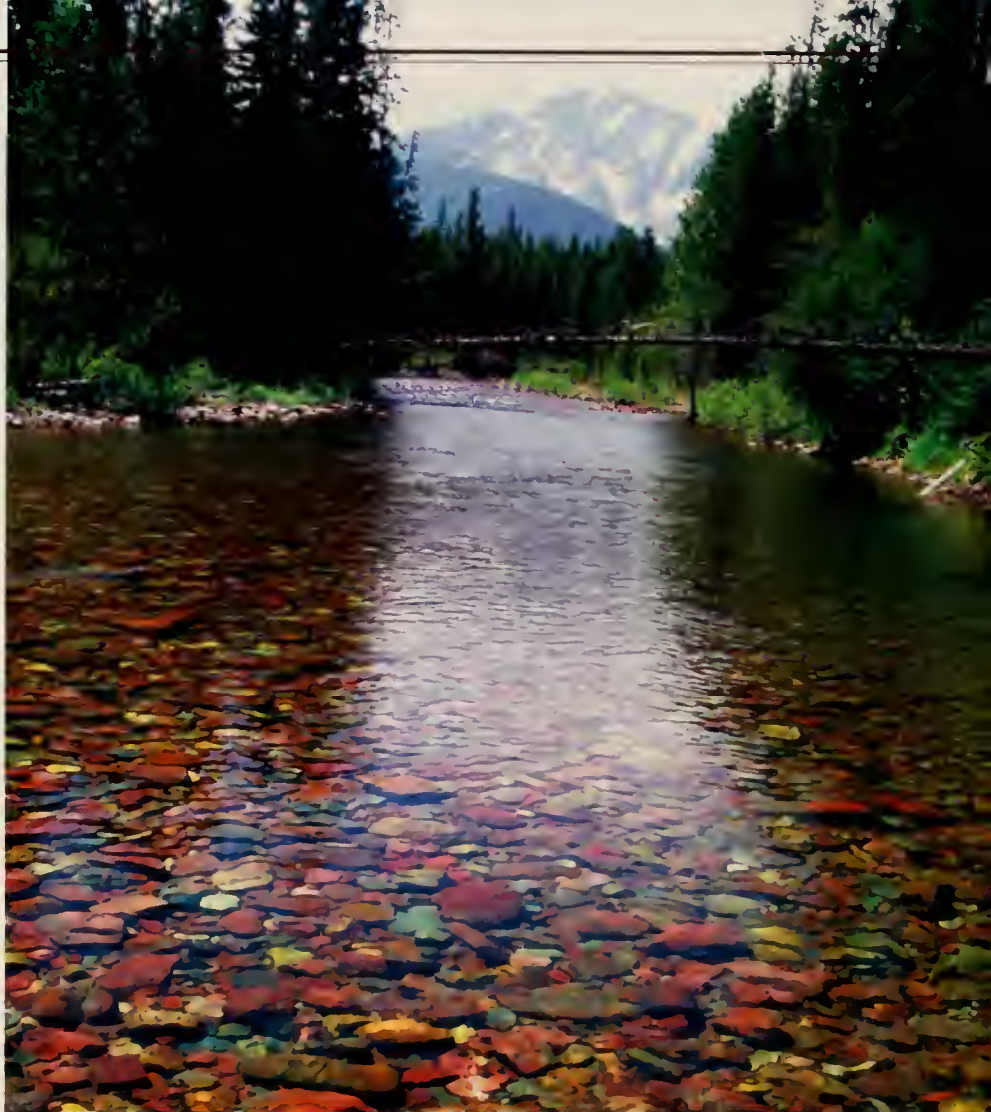
westslope cutthroat for future generations.

Several weeks after that first visit, I returned to see Hollopeter. He had asked me to come back when the weather warmed and drive him up to his old home-
stead, which he hadn't seen for years. We got in my truck and headed up the hill. Though we could see the clearing from a forest road halfway up the mountain, we couldn't reach the old home property. The land had since been subdivided and was built up with huge log homes sporting NO TRESPASSING signs.

"Doggone it, everything's changed," said Hollopeter, as I turned the truck around and headed back to his house. "If I would have known, I would have hung on to more of this land."

Hollopeter has seen many changes in this area of Montana over the past several decades. And he's seen that much has been lost. He told me he now agrees that it makes sense for FWP to take steps—even those as seemingly drastic as "poisoning" lakes—to prevent yet another part of this natural world from disappearing. 🐻

EDITOR'S NOTE: *The Environmental Impact Statement for rehabilitating wilderness lakes is in its final draft stage and will be released for public comment later this year. A final EIS is scheduled to be released by the end of 2004.*



MICHAEL J. WOLF

GENETIC POLLUTION Once home only to pure westslope cutthroat, Big Salmon Creek (above) is now seeing increasing numbers of rainbow trout leaking from Lena and the Necklace lakes upstream. Those fish also threaten the pure population of westslope cutthroat in Big Salmon Lake downstream.

LETTERS

Continued from page 2.

due to mild winters, good calf recruitment, and fairly restrictive hunting regulations.

As for elk transplants, during the early 1980s I moved roughly 80 elk into the Yaak area from the National Bison Range at Moiese as part of a herd management and reduction program. Those elk were distributed into three areas of the Yaak River drainage. I believe those transplants helped speed up the overall elk population growth and expansion process in the Yaak, but now suitable habitat has been filled. Transplanting more elk into the area, or anywhere that habitat

can't support more animals, would be a put-and-take approach to elk management.

More access needed to public lands and waters

The penultimate coming issue for recreationists in Montana will be access. We need to open up this state if we want to address the problems of overcrowding and not lose the beneficial economic impact of tourism. To entertain the idea of limiting hunting or fishing licenses is to turn our back on the unquestionable premier source of income for our state, or any state.

We have more than enough quality land and water to handle

a great many more sportsmen, which would greatly assist our economy. But we need more access. For example, the Ruby and Boulder rivers have miles and miles of blue-ribbon quality fishing but almost no access. Some public bridges are up to 7 miles apart. To make matters worse, some are illegally posted with NO TRESPASSING signs.

Montana needs to develop

more programs like Block Management to increase public access, and counties need to enforce the state's stream access laws to stop landowners from posting signs or erecting barbed wire on bridges, where public access is legally protected. We need to keep Montana open and free.

DENNIS GRUNDMAN
Secretary, Montana Public Lands/
Water Access Association, Big Sky



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Reach us at: fwp.state.mt.us/foundation,
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Muskrat

(*Ondatra zibethicus*)

Early one evening while fishing, you see a rabbit-sized animal swimming low in the water near shore. Is it an otter? A beaver?

Most likely the creature is a muskrat, a common furbearing mammal found throughout Montana.

Named for the smelly fluid secreted by two glands on its lower stomach, the muskrat is a medium-sized rodent closely related to the vole.

Most active at night, the muskrat is found along rivers and streams and in lakes, reservoirs, ponds, and marshes in the countryside as well as in towns and cities.

IDENTIFICATION

Musk rats are from 18 to 24 inches long (including the tail) and weigh 2 to 5 pounds. They have small ears and eyes and often sit hunched over. Musk rats look somewhat like a beaver, though beavers are much larger (25 to 75 pounds). Also, beavers have a wide, flat tail, while the muskrat's tail, though also scaled and hairless, is thinner and flattened laterally, like a boat rudder.

Musk rats have small front feet, used mainly to hold food, but their hind feet are large and webbed. These act as paddles, propelling the muskrat through the water as it steers with its strong tail.

Musk rats are chocolate brown on the back, fading to light brown with a reddish tinge on the sides. The belly and throat are cream-colored.

FUR

Musk rats, which have a soft fur used for coats and hats, are the most commonly trapped animal in North America. The underfur next to the muskrat's body traps air and prevents its skin from getting wet. Long brown guard hairs cover and protect the underfur.

PREDATORS

Because muskrats move awkwardly on land, they can be easy prey for coyotes, foxes, lynxes, and raptors. But in the water, where they spend most of their time, these excellent swimmers can escape most any predators except mink and otters.

LODGING

Musk rats live almost anywhere there is water. In slow-moving rivers, they burrow into banks from underwater, angling their tunnels up so the dry living chambers are above water level.

In lakes and marshes, muskrats build dome-shaped houses of cut bulrushes, cattails, and mud. Muskrat lodges, which look like those of beavers only smaller, are usually 6 to 8 feet in diameter at the base and have walls 1 to 2 feet thick.

Musk rats enter their lodges, which contain several different sleeping areas, from underwater.

FEEDING

Like bears, humans, and many other animals, muskrats are omnivores. They eat the roots, stems, leaves, and fruits of many water plants, such as cat-



ALAN G. NELSON

tails, water lilies, and rushes, but will also consume small fish, freshwater clams, snails, and even turtles.

Near their lodges, muskrats build several small feeding mounds, called "push-ups," where they can sit and eat undisturbed by predators.

REPRODUCTION

You've heard the term "breed like rabbits"? How about "breed like muskrats"? An adult female can have two or three litters of up to ten young each summer, and some have been known to produce as many as 45 kits in a single year.

The kits, which are naked, blind, and nearly helpless, weigh about one-half ounce at birth. But they grow rapidly. Within two weeks they can swim and dive, and after just one month they can live on their own.

POPULATION

Muskrat numbers have increased in parts of Montana over the years due to the construction of artificial wetlands, but numbers have declined where natural wetlands have been drained. If you haven't seen many muskrats recently, you're not alone. Brian

Giddings, FWP's furbearer coordinator, says the state's trapping harvest has been down the past several years, likely due to drought. The rain shortage has dried up many marshes and ponds, giving muskrats fewer places to live.

"Once conditions improve, muskrats will likely return to those areas," Giddings says.

When the rains return, watch out. Musk rats are so prolific they can quickly overpopulate a marsh. In what is dubbed an "eat-out," muskrats consume all the cattails and bulrushes in an area. Then the starving animals turn on each other, fighting to the death and even eating their young. This gruesome behavior keeps their numbers in proportion to the food supply.

FUN FACTS

Musk rats and beavers are the only mammals that build their home in the water. Unlike the beaver, however, the muskrat does not store food for the winter. It needs to eat fresh plants each day, and sometimes it makes channels in the mud to get from its house to reach food under the ice. To stay warm in winter, groups of muskrats huddle together in their lodge. 

BY TOM DICKSON

Tom Dickson is editor of MONTANA OUTDOORS

TURKEY LURKING

A turkey hunter waits with excruciating patience as a gobbler cautiously approaches from behind. Similar to bugling in rutting elk, turkey hunting requires precise calling skills, knowledge of turkey habits, and, above all, the ability to sit still for hours. Learn how FWP introduced this great game bird throughout Montana, and what more might be done to spread the species further, starting on page 6. Photo by Donald M. Jones.